

SETTLEMENT OF THE CONGO RUBBER TROUBLES.

Special Correspondence of the "India Rubber World."

BRUSSELS, November 22.—The trading companies that have been exporting ivory and India-rubber from the upper Congo basin in constantly growing quantities for more than three years have just settled, as far as caoutchouc is concerned, their serious misunderstanding with the Congo Free State. The story of the beginnings and growth of the Congo rubber trade is interesting and will be given in a later letter. To-day the writer will give only such details of this development as are needed for a clear understanding of a serious dispute and its settlement, which is the news of the day in the rubber trade of Europe.

Caoutchouc is one of the chief natural riches of the Congo basin. The greater part of the banks of the main river and its tributaries are covered with forests in which the vines abound that supply India-rubber. In the Congo basin there are two caoutchouc-producing plants, the *Landolphia florida* and different varieties of *Ficus*. Only the former has, thus far, been exploited to any extent by the native rubber-gatherers. *Landolphia florida* is seen almost everywhere in the forests, its long, thick vines climbing to the top of high trees. It grows spontaneously throughout the Free State, but flourishes best in the valleys.

The Congo trading companies enumerate some twelve or fifteen different products which they believe will in time be profitable articles of export. At present, however, the exploitation of all upper Congo products, except ivory and India-rubber, is subordinated to the creation of routes of communication; for everything from the upper Congo has to be carried on the shoulders of men 235 miles around the cataracts which separate the great navigable waterways of the upper river from the head of navigation on the lower Congo. Only ivory, worth \$4600 a ton, and caoutchouc, worth \$1400 a ton, can stand the cost of transportation around these cataracts. It costs \$200 a ton to transport caoutchouc from Stanley Pool to Matadi, on the lower river, where ocean steamers take their cargoes on board.

In spite, however, of the enormous cost of transportation, the rubber trade of the upper Congo has quadrupled in four years. In 1890 the total export of Congo caoutchouc was 133,666 kilograms. During the first six months of 1892 the rubber harvest was 245,553 kilograms, or about 540,000 pounds, representing a value of about 982,000 francs; and the trade is still in its infancy and most of the energy of trading companies is still absorbed, not in collecting rubber, but in planting new stations, in securing the coöperation of natives as caoutchouc collectors, and in transporting steamers on the backs of men to the upper river. The Congo State has itself engaged in the rubber harvest, but the rapid increase in the trade has been brought about chiefly by the commercial companies which have established themselves upon the upper Congo.

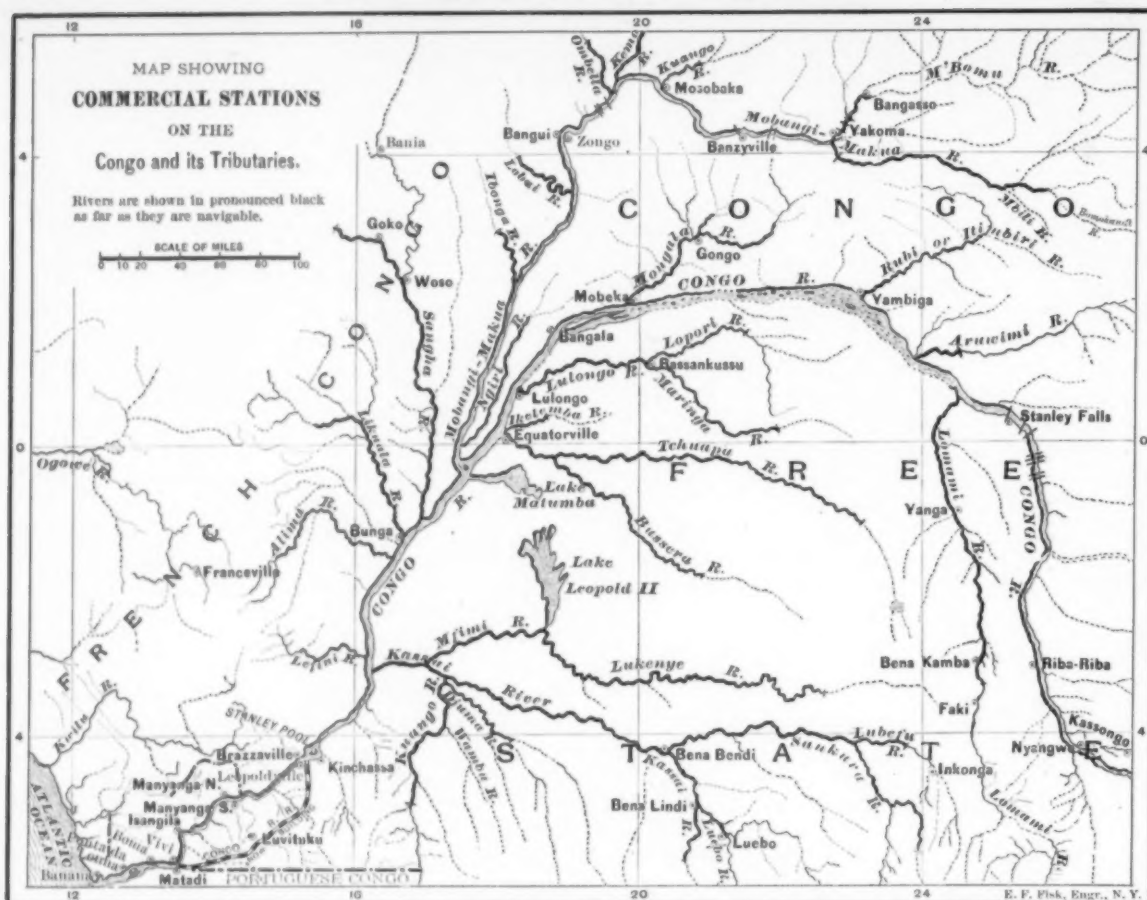
Foremost among them is the Société du Haut Congo of Brussels, which now employs fourteen little steamers on the upper river and has over twenty establishments scattered far and wide along the main river and its most important tributaries. Next in order of importance is the Société Hollandaise of Rotterdam. This Dutch company has important interests on the lower Congo and has extended its trade to the upper river, though it has only about one-third as many stations as the Brussels company. The French house of M. M. Daumas & Co. also has a half-dozen trading houses chiefly along and near west bank of the Mobangi tributary. Several other smaller concerns are establishing themselves in the country, and two companies—the Anglo-Belgian India-Rubber and Exploring Company of Brussels and the Société Anversoise du Commerce au Congo, of Antwerp—have been organized this year, but have not yet occupied the field.

There had been a little premonition of trouble with the Congo Free State, but when it came it was almost like a bolt from a clear sky and simply paralyzed the trading companies. On February 14 last Lieut. Le Marinel, Governor of the Mobangi river district, issued two circulars which had the effect of turning the Rotterdam and Brussels companies out of the Mobangi-Makua basin, where, in new territories just brought under the control of the State, they had established themselves. The Société du Haut Congo had built trading posts at Bangasso on the M'Bomu tributary of the Makua, at Yakoma and at Banzyville, and had the prospect of an enormous trade in this virgin field; for there were great stores of ivory in the country, and the natives were eager to trade and anxious to gather rubber in payment for goods brought by the whites.

Le Marinel's circulars declared that all merchants who purchased ivory or rubber of the natives in the Mobangi district would be treated as receivers of stolen goods. Until further orders, traders would not be permitted to do business along the Mobangi, the largest tributary of the Congo. The reasons given for this arbitrary action were that traders had sold fire-arms to the natives, that they were pushing into the country more rapidly than the Free State could bring it under control, and that the effect of the traders upon the natives was demoralizing.

The trading companies declared that all this was pure pretense; and as proof that these charges were not the bases of the State's action they cited the fact that a similar circular was issued soon after by Lieut. Lemaire, Governor of the district of the Equator, where the control of the State had been well assured for some years. Lemaire's circular created practically a monopoly of the rubber trade in favor of the Congo State itself.

With these drastic measures in force no commerce could be carried on. When complaint was made to the Congo State authorities in Brussels, they simply answered that



their agents were authorized to maintain the rights of the State upon its domain. The meaning of the word "domain," as here used, was plainly evident. The domain of the natives was the site of their villages and plantations of bananas and manioc. The domain of the State was all the rest. Caoutchouc was not harvested in the village streets or in the manioc fields, but in the virgin forest. The State claimed the right to place any restrictions it pleased upon the exploitation of forest products. The same circulars that killed the enterprise of private companies forbade the natives to sell rubber to any one not authorized by the State to buy it.

Of course the State agents were acting under the orders of the central authorities at Brussels. The trading companies asserted that this arbitrary dictum was in direct violation of the General Act of the Berlin Congress, which provided that the commerce of all nations should have complete liberty, and that no monopoly or special privileges should be given. The Belgian papers were full of

NOTE.—The map shows only stations of trading companies. Congo State and missionary stations are not shown unless they are also trading posts. The Belgian and Dutch trading posts on the Mobangi-Makua are at present abandoned by order of the State. The stations of the Katanga Syndicate on the Lomami and the Congo above Stanley Falls, from which the whites were driven by Arabs in May last, will probably be reoccupied soon. The line of the proposed Congo railroad, between Matadi and Stanley Pool, around the obstructions to navigation in the Congo river, is also shown.—THE EDITOR.

the dispute. Column after column was devoted to the discussion. The protest of the Société du Haut Congo sent to the Free State Government was unheeded, and the company, on August 10, appealed directly to the Belgian Ministry, and demanded the intervention of the Government. The Ministry decided, if possible, to bring about an understanding between the conflicting interests; and it is largely due to the tactful intervention of Premier Beernaert between the Sovereign of the Free State and the aggrieved companies that the difference has been amicably settled. The decree was issued by the Congo State on October 31, and went into force at once. Here are its provisions:

The State abandons entirely to private persons or companies the right to collect caoutchouc in its unappropriated districts. The following districts, however, are excepted:

No private persons or companies shall engage in the exploitation of caoutchouc in the basins of the M'Bomu and Mobangi-Makua above their junction, nor below that point, at a distance of more than twenty kilometers from the river; nor within a radius of twenty kilometers around three points, to be selected by the State, on the river, the first below Zongo, the second between Zongo and Banzyville, and the third above Banzyville; nor in the basins of the Mongalla, Itimbiri, and Aruwimi rivers; nor in the basins of the Lopori and Maringa rivers above their junction: nor within a radius of twenty kilometers around a point to be selected by the State near the confluence of the Bussara and Tchupa rivers.

As soon as circumstances will permit the State will facilitate the collection of caoutchouc in the districts on the Congo above Stanley Falls and on the Lomami above 2° 30' south latitude.*

The Governor-General will concede to non-native collectors who build stations for the collection of caoutchouc the exclusive privilege to gather the product within thirty kilometers around their establishments. No new station can be built within thirty kilometers of those already existing.

The caoutchouc can be gathered only by means of incisions in the trees or vines.

Native collectors gathering caoutchouc above Stanley Pool must deliver, as an impost, to the State, a quantity of the product to be fixed by the Governor-General, but not to exceed one-fifth of the quantity gathered. In lieu of this tax commercial agents at each station must pay a duty of twenty-five centimes per kilogram on the entire quantity collected. This tax will not be modified before the completion of the railroad between Matadi and Stanley Pool. This toll or tax will not be levied upon the product collected upon the left bank of the Mobangi-Makua river.

Penalties are prescribed for the violation of the provisions of this decree.

The region where rubber collection is restricted or prohibited lies north of the Congo, except in the middle and upper portions of the basins of the Lulonga and Tchuapa basins, whose rivers are southern affluents of the Congo. The purpose of this restriction or prohibition is to keep traders out of regions where State stations have not yet been established. These stations are essential forerunners

of commerce, in order that the interests both of traders and natives may be protected and the State tax collected.

The greatest point gained by the companies is the retirement from the larger part of the field of the Congo Free State as a competitor for the rubber trade. All the rubber is collected by natives and the State toll or tax is levied upon the whole product except that gathered on the left bank of the Mobangi-Makua, where, as a special encouragement, no tax is imposed in view of the competition of French traders in the French Congo country on the other side of the river.

The territories that are thus opened to the rubber trade comprise navigable waterways about 5000 miles in extent, while the prohibited or restricted zone contains about 1000 miles of steamboat navigation.

The decree on the whole gives much satisfaction to the companies, because, though they are excluded from or restricted in rich districts, fully seven-eighths of the rubber-producing territory bordering the river is open to them. It is believed here that next year's export statistics will show a very considerable advance upon this year's figures, as the expansion of the trade thus far has been almost wholly in the regions where there is still no interdict upon the collection and export of rubber.

A VISIT TO THE RUBBER REGION OF PERU.

Special Correspondence of the "India Rubber World."

I AVAIL myself of an opportunity to send a few observations on the Peruvian rubber field, by the "Andes limited mail,"—a bareheaded and barelegged Indian, on whose back is strapped a sealed box containing the letters which he carries at a dog-trot over a mountain trail until he comes up to his relay, who takes the box and trots on to the next "station," and so on, until the Pacific is reached, at Truxillo, whence a steamer will carry the letters to Lima or the Isthmus of Panama, for New York. Writing from Moyabamba it will require twenty-five days to reach Lima, which is an illustration of the "facilities" existing here for communication with the capital of Peru. Commerce with New York and the rest of the world is to be developed by the quicker and more continuous channel afforded by the Amazon, the possibilities of which the readers of this journal may soon expect to hear in more detail.

Herein appears an opportunity for American enterprise seldom equalled. In my recent canoe journeying and camping-out along the affluents of the upper Amazon have revealed much that is of interest in regard to the great undeveloped wealth of crude rubber which exists on those wonderful streams.

As for rubber in Peru, it may be said that the Caucho of Eastern Peru is practically exhausted, and will soon cease entirely to be a source of profit to the native gatherer, or of revenue and income to the Government at Lima. As was printed in my official reports while United

States Consul at Pará the Caucho is fast disappearing, the nearest forests being now so far away from known navigation as to be of little practical value. This is entirely due to the reckless method of the Peruvian cauchero (caucho-gatherer) and the lack of any efficient supervision or laws on the part of this Government. The marauding natives are free to roam about with an axe to cut down every tree they can find that will in dying bleed a few gills of milk into the tin cups which like a cupper's implement drains the life blood from the prostrate tree. The Lima Government is controlled by the inhabitants west of the Andes, who are said to represent the civilization of their country. Yet they have knowingly permitted the ignorant half-breed native of their frontier district to become mere tools,—in fact, slaves or peons, in the employ of aliens to their land. For a mere pittance they devote their worthless lives to going about the forests killing the geese that lay the golden eggs for Peru.

The "negociantes" (rubber-exporters) of Iquitos and points along the eastern river of Peru are all foreigners. With perhaps a single exception the numerous merchants and buyers of Iquitos are of foreign birth,—clever gentlemen, all of them, and shrewd business men who may be depended upon to exert their influence in the direction of their business interests. It would scarcely be just to say that they are not interested in the future of Peru, as the most prominent and successful, as well as a popular, dealer has placed a very considerable amount of capital in this country in which he has resided and with which he has

*This is the region from which all white men were driven in May last by the Arab revolt.—THE EDITOR.

been clearly identified for twenty years. In discussing this question this gentleman admits that the supply of Caucho will soon cease entirely, but he thinks that in this event the gatherers will direct their attention to the collection of fine rubber. If they adopt the same barbarous method in any virgin forest of fine rubber, that will also disappear in a short time. No effort whatever is made to replant or to cultivate for the future.

The dealers say that the Caucho of Peru is an entirely distinct tree from the fine rubber of Brazil, though unquestionably of the same family. They assert that the same methods of collecting the milk are not applicable to both trees, because the Caucho tree is widely scattered, seldom ever being in groups; the trees are often found a half a mile apart.* They do not seem to consider that the Peruvian method of application,—i. e., an axe to the trunk of a tree,—might have been the prime cause of this present scarcity of Caucho trees. After the tree has been felled, channels are cut along the bark in such a manner as to collect and direct the flow of milk to one or two outlets, where it is received or drained into tin cups—say a gallon of milk or a pound of caucho to each tree. It requires about one day to collect all the milk from a prostrate tree which has required twenty years to mature, and is then left to rot.

As dealers in rubber know, the Caucho comes to them in rough slabs, instead of the clean round hams of fine rubber of Brazil. These slabs are formed by making a hole in the clay into which is poured the milk of all the trees an Indian can kill in a day. Into this white milk a certain quantity of soap is mixed, producing a most vile smelling compound that will kill even mosquitos at forty yards and make even an Indian's stolid blank countenance show some expression of disgust. After twenty-four hours it becomes nearly a solid mass, which is drained out and

carried on the back of the Indian to the nearest point of canoe-navigation. If he is not a peon or slave, working for a padrone he probably will dispose of the mass for some Cachasa rum and a few rough provisions and return to the forest to renew his depredations.

Caucho milk cannot be congealed by the smoking process applied to the fine rubber, which fact indicates that the product is of a somewhat distinct quality. If given sufficient time to evaporate (without the use of any soap) it would produce a much better quality of Caucho, but not equal to the fine rubber.

The "Sernamby" of Peru is of two grades,—Sernamby of Caucho and Sernamby of rubber,—both being the smaller pieces or the drainings of the first grades, a higher price being paid for Sernamby because it is drier. Besides, these smaller pieces are coagulated naturally. The Sernamby is found attached to the edges or drains of the bark channels or in the dregs of the tin cups which are about six inches in diameter.

The river Ucayoli, which parallels the Javary, is said to be the most prolific of all in fine rubber, and it has not been worked, having been only recently discovered. The Ucayoli is navigable for a distance of 800 miles from its confluence with Amazon above Iquitos by steamers drawing four feet in the summer. During eight months boats of eight to twelve or even twenty feet may ascend to the falls, above which canoes navigate as far as Cusco, the old capital of the Incas. Near by this point a railroad connects for the Pacific.

One important feature of the land trail has been developed by the establishment of the fact that there is plenty of Gutta-percha in the mountains I have crossed.

J. ORTON KERBEY.

Moyabamba, Peru, September 25, 1892.

THE PARÁ RUBBER TRADE FORTY YEARS AGO.

By R. M. Everit, New Haven, Conn.

THERE were on Long Wharf, in New Haven, many years ago, a number of houses engaged in the West India trade. Among them was the firm of R. Hotchkiss & Sons, which, after the death in 1842 of Mr. Russell Hotchkiss, became Hotchkiss Brothers, the members of it being Russell, Henry O., and Edward Hotchkiss, sons of the founder of the house. On my becoming a partner in the firm in 1854 the name was changed to Hotchkiss Brothers & Co., and it remained so until 1860, when I withdrew and went into business in New York city.

The Hotchkiss firm was led to engage in the Pará rubber trade in this manner: In 1850 there were but four importers of India-rubber in the country,—John Bertram and Thomas P. Pingree, of Salem, Mass., and H. K. Corning and James Bishop & Co., of New York. The price here for India-rubber had been increased from time to time

from 25 or 30 cents per pound until in that year 50 cents was demanded and paid for it. This price the manufacturers considered too high, and they seemed to think that the importers were imposing upon them. This was no doubt the way that L. Candee & Co. felt, and, being located in New Haven, they went to the Messrs. Hotchkiss and talked over the matter with the idea and hope of getting them to engage in the business, and so bring India-rubber to this port, where, and in the near-by towns, it was then used.

Previous to the year 1850 I had spent from seven to ten months in each of seven years in the West Indies, and so had become acclimated and familiar with the ways of living and of doing business in hot climates. The Messrs. Hotchkiss came to me, and as I was favorably impressed with the project, and willing to join them in it, it was arranged that I should take passage in some vessel bound to Pará, take some money and letters of credit with me, and see what, if anything, could be done in the way of establishing a profitable business there. At this time it

*The two chief varieties of rubber obtained from the Amazon and its tributaries are the "borracha,"—the product of the Seringa tree,—and the "caucho" of Peru. The Seringa is gregarious in habit, but the Caucho is scattered solitarily through the forests.—COURTNEY DE KALB in this journal, June 15, 1890.

was rather difficult to get a passage to Pará, particularly for any one suspected of wanting to go there for business purposes, and so applications were usually declined. James Bishop & Co., however, promised to give me a passage in their barque *Republic*, to sail about October 15, 1850, but when this time came they wrote me that the yellow fever was prevailing there to an alarming extent and advised me not to think of going out then. This advice I followed, and perhaps it was well that I did so, for I found out afterwards that more than four thousand persons, or nearly one-quarter of the whole previous population, died during the year.

After some months we heard that this fever was abating, and in March, 1851, we chartered a small center-board schooner of 98 tons register, and 700 or 800 barrels capacity, called the *H. S. Lanfair*, and loaded her with flour and other things, and I embarked on her for a country where I knew no one and where no one had ever heard of me. I had, however, two letters of introduction that proved to be good ones. I was thirty-eight days in getting to Maranhão, where we touched first and landed a part of the cargo. I then proceeded to Pará, where the balance of the cargo was discharged and the vessel reloaded with nuts and other products, including 50,000 or 60,000 pounds of rubber. For this last I paid 17 milreis per arroba of 32 pounds (it was sold then by the arroba and for many years after), exchange being $31\frac{1}{2}$ d., or nearly twice what the rate now is. The price paid for this rubber was the same as others had paid for several months, and was much more than had ever been paid before for the article. The vessel had a quick passage home of eighteen days, and the rubber she brought was mostly sold at 50 cents per pound to L. Candee & Co., a little going to another party at 52 cents.

As this our first trial gave a little profit, my partners sent the vessel back to me, soon after following it up with a second and larger one, and so continued to keep one or two vessels running for seventeen months, during which time the price here for rubber was continually declining, until it got down, if I remember rightly, to 30 cents or even less. It declined also in Pará, so that what I at first paid 17 milreis for I bought at 10 milreis, but as it was we

had not found the business profitable so far, and my partners recalled me. When I reached home, however, I told them that I had been recalled at the wrong time, and as it then seemed so to them, we very soon bought a fine little brig called the *Mary Emily*, and soon after bought another vessel called the *G. Spear*, and so kept these two vessels in the trade most of the time until 1860. I then left this firm and joined C. P. Burdett in New York, when the firm of Burdett & Everit was formed, which firm,—and their successors, Burdett & Pond,—as is well known, built up a large business and became among the largest importers of Pará rubber in the country. The Messrs. Hotchkiss continued two or three years after I left them, when, their agents in Pará having died, they gave up the rubber business and devoted their time to the West India trade.

In 1851 and 1852, when I was there, Pará was a small place of 12,000 or 14,000 people, with not a dozen Americans in the whole province, and, like the business, was then very small compared with what both are to-day. The first steamer on the river commenced running while I was there to Barra, on the Rio Negro, which place, as I understand, is now a large town of 30,000 or 40,000 inhabitants, called Manáos, and is visited by foreign vessels and numerous steamers. When I was there, all the products of the country were transported to Pará in curiously-constructed covered boats, some of which were six or eight months in making a trip down and up the river. It is true the uses for rubber were very small then, for as late, I think, as 1853 or 1854 the shoe companies, by agreement among themselves, one year made altogether but 1,200,000 pairs of shoes. Now the whole equatorial region of the world is being ransacked for the raw material.

While the Messrs. Hotchkiss and I were together, we did some good to others, I think, in introducing into the Amazon country, among other things, American clocks and matches and also the Brazil axe made by Collins & Co., which was and still is a most useful implement for rubber-gatherers and others. We were also the first to use American gold in purchasing instead of Spanish and Mexican dollars, the former of which then could be had only at about 12 per cent. and the latter at 5 per cent. premium. This for awhile was greatly valued by the importers here.

WAXES, GUMS, AND RESINS USED IN INSULATING WIRES.—II.*

By Frederic A. C. Perrine, D. Sc.

OF an entirely different character and for different purposes are the wires which are insulated with Gutta-percha, India-rubber, and other similar gums. These, when properly manufactured, may be immersed in water indefinitely without deterioration, and even at the pressure of the deep seas—amounting to from eight to ten thousand pounds per square inch—have been employed for years in transmitting messages from continent to continent.

The first ocean cables were manufactured before the art of vulcanizing India-rubber was thoroughly perfected. In the earliest attempts at the use of this material it was

wound upon the wire in the form of pure narrow strips solidified into a homogeneous mass by pressure and heat; but so many difficulties attended this method of manufacture, and there was so much uncertainty in the product, that the attempt to use rubber was entirely given over in favor of the more easily manipulated Gutta-percha. This latter material could be easily rendered plastic by a moderate amount of heat, and could be cemented together by simple pressure at a slightly elevated temperature,—properties which enabled the method of covering wire with Gutta-percha on machines similar to our modern tubing machines to be adopted from the first.

* Part I was published October 15, 1892.

One of the first cables laid was that across the Black Sea for use in the Crimean war, and though it was covered with a single coating of Gutta-percha and not protected by either armor or serving was without difficulty maintained during the progress of the war, and only abandoned at its close on account of there being no further need for the use of the cable. The manufacturers quickly found, however, that there were too many difficulties attendant upon the construction of a wire covered with one coating of Gutta-percha, however thick that coating might be, and in spite of the increased cost, wires were made with two or more coatings successively applied, each one being cemented to the one lying under it by the means of a soft compound of Gutta-percha and tar, which served the double purpose of binding together the several coatings and filling up any imperfections to be found in any of the coverings.

Experiments were made with various coatings up to twenty, but modern practice has determined upon three being sufficient for the production of a perfect wire.

In the deep-sea cables this core so made is further wrapped with jute yarn which has been tanned to prevent decay, and on this as a bedding is laid twelve or eighteen iron wires sufficient in size to avoid accidents to the core in handling, and to give strength to the cable enabling it to bear the great strain of paying out behind a ship into the depths of the ocean.

While these experiments were being carried along and the earlier cables manufactured and laid, certain makers having great faith in the non-absorbent qualities of India-rubber were untiringly employed on rubber and its compounds. In its pure state it was found far more difficult to compress into one mass than Gutta-percha, while when vulcanized it became entirely without power of uniting again when once cut, besides having a very deleterious effect upon the copper wire through the sulphur continually given off; which effect could not be entirely overcome even by coating the wire with tin.

On large sizes the tinning of the copper is sufficient protection, but the small wires used in telegraph cables are invariably rendered brittle in spite of the tin coat.

To avoid this action, Hooper at a very early date designed the core which bears his name, and which up to the present time has been found to be the best India-rubber construction. This core consists first of a taping of pure rubber laid directly upon the tinned wire covered by a compound layer of rubber without sulphur laid on in a tubing machine. This again is encased in a vulcanized coating held in place and protected from abrasion by a taping of frictioned cloth.

When such a core is carefully manufactured, it is fit for use either in the air or under water, and when once well laid is as enduring as the best Gutta-percha wire.

Along these lines numerous wires have been designed by the various manufacturers, some of a single coating of vulcanized rubber and some carrying out the idea of a multiple covering. In this country very little wire has been made of more than two different compounds, though the best is made in three operations, so that one coat may repair any defects of the other coverings.

Where two compounds are used, the underlying one consists of a pure gum very heavily compounded with a mineral, such as asbestos, or with an oxid, as of zinc or magnesium, but in the external coating the greatest variation of compound is in use; while a very few confine themselves to the use of pure gum or unvulcanized boot clippings. Most of the manufacturers make an extensive use of the regular rubber shoddies and substitutes.

In reference to these materials the manner of their preparation and use is all important, and a wire defective on account of their presence is easily detected by the careful observer.

The essential requisites of a rubber-coated wire are that it shall not absorb water above about 3 per cent. of the weight of the rubber under any circumstances, and that when exposed to the sun and the wind, the rain and the frost, it should not crack or become hard.

For the first of these requirements it is essential that when a shoddy or a substitute is used there should be no fibers along the sides of which water, by its powerful capillary attraction, may penetrate from the surface to the interior and make connection with the copper. Not only should a first-class shoddy be bought, but in grinding the batch the greatest care should be taken that the mixing be thorough, for a rubber which on being cut shows the presence of minute fibers and particles of mineral is to be suspected at once, and it will probably be found to be defective on test.

Too much compounding with either shoddy, mineral, or sulphur will, as every rubber-man knows, produce a wire unable to stand exposure to the weather. Though many of the wire-manufacturers are well-established rubber-manufacturers also, yet the constant aim at cheapness has led some of them to err in this very regard, with the effect of driving rubber wire from its position of prestige. A few years ago this tendency drew from one of the manufacturers of insulating tubing an attack on the rubber wires then in the market, seriously damaging them, and aiding in the general introduction of tubing for the wiring of buildings, in which service rubber wires had been before used almost exclusively.

There is no doubt that thoroughly serviceable rubber wires may be purchased in the market to-day at a suitable price, but for line use in the open air so many inferior grades of rubber wire have been produced to compete with the weatherproof wire described above, which are neither durable nor of good insulating properties, that the question has seriously arisen whether an insulation can be made of India-rubber which may be depended upon.

As I have said above, there is really no doubt that such wires can and are manufactured, and it is unfortunate that the rubber-manufacturers have attempted to compete with these weatherproof wires in whose field only the cheapest shoddies are able to compete, and then even with a product inferior to a well-made asphaltum wire.

THE rubber plantation at the foot of the Himalayas, a Government project, is reported to be flourishing. There are now nearly 2000 plants which have attained a fine growth.

THE CONSOLIDATION OF CAPITAL.

By William Nelson Black.

THE union of the different companies engaged in the manufacture of rubber goods into single companies with an enormous capitalization brings us face to face again with the question that has recently been agitating the people of this country, and furnishing Congress, the State legislatures, and even the courts a capital opportunity for the display of their demagogic instincts. The new company, with a capital of \$50,000,000, for the manufacture of rubber boots and shoes, and the company for the manufacture of rubber mechanical appliances with its capitalization of \$15,000,000, suggest at once the vastness of the interests involved in this industry, and the earnestness of the struggle for improved trade processes recently undertaken. The action of these companies furnishes us also with an occasion for a dispassionate discussion of the industrial and financial problems involved in all corresponding movements. Will such consolidations be beneficial or injurious in their influence on our industries?

There is a material difference between the "trust," as it was originally conceived, and the consolidated company. The trust was merely a device for regulating the forces of competition. In every industry—and it may be said, also, in every mercantile field—there are men rich in productive schemes but beggarly poor in resources. I think it was Erastus Wiman who once said that one-third the men in business ought to retire and become pensioners for their income on the other two-thirds, who could better afford to pay them and pay them well for their inactivity than to meet their wild-cat industrial and mercantile methods. This may be a pretty strong declaration, but it is not so very unreasonable. After each financial panic the business world rises slowly and painfully, step by step, into a condition where industry becomes profitable again and mercantile operations prosperous. But just here intrude the incompetent, the reckless, and the men who, perhaps blamelessly, but still injuriously to the public, attempt to operate with insufficient capital or credit. These are the men who directly produce the next panic. Finding themselves continually at their wit's end for money to meet their obligations, they think themselves obliged to undersell their competitors for the purpose of enlarging their operations. But their strong competitors in turn are obliged to meet their cuts, and the market begins to fall. Then the wild-cat operator must stoop to conquer once more and cut again, and again he must be met by his more substantial rival. But in the meantime the cost of production does not decline. It often rises, indeed, on account of the stubborn determination of workmen to maintain themselves above the fluctuations of the market; and so it finally happens that the cost of production becomes as great or greater than the receipts from sales. Then, of course, the wild-cats begin to go to the wall, panic follows, and the whole process must be gone over again. Hence it is not altogether unreasonable to say that the business world

would gain by impounding its wild-cats, and providing for them from a general fund. The trust was a device for making this provision in advance of the catastrophe. It was a plan to follow such a suggestion as Mr. Wiman's organically, and with the least sacrifice of personal earnings.

The device, however, has not been permitted for the present to succeed. It has been met by the malign influence of political chicane, prompted by ignorance; and now in its place has risen the spectacle of consolidated capital to sear the eye-balls of men timid about ghosts, and gifted with great power for their materialization. Will the second plan meet the objects of the first, without having an injurious effect upon industry?

We may dismiss the idea that all combinations of capital are dangerous, because it is founded on the false notion that capital is a tyrannical force oppressive to all except the large capitalists. Capital is altogether a beneficent force, working for an improvement in the condition of every member of the community; and the idea that it is an aggressive force of dangerous potency is derived partly from the fact that it offers a check to the encroachments of political power, and partly from the misconceptions of labor organizations. As a matter of fact everything that improves social conditions is due to capital. It may be said, indeed, that capital is only the fruit of the struggle for improved social conditions, physical, mental, and moral. The \$10,000,000,000 invested in our railroads was created for the express purpose of facilitating transit and transportation, and this immense total of wealth would have had no being had it not been produced in the pursuit of this object. So, too, of all other capital. It is but the material, visible sign of some beneficent object suggested in the evolution of our civilization, and it may be called therefore the only tangible thing that distinguishes civilized from savage society. Then let us leave the demagogue to his idols, and, considering the subject only from the business man's practical point of view, inquire into the effect of these consolidations of capital.

When it is a question of political consolidation, or centralization, as we call the union of dispersed political forces, we know that not only the weight of public opinion in this country, but the example of our political organization, is against it. It is believed that divided political responsibility gives greater administrative efficiency and greater individual strength than centralization. But for reasons already suggested the chasm between the political and the industrial forces is very wide. The political forces are inherently tyrannical and dangerous. They draw their inspiration from the commonly-accepted dogma of "the right to rule," while the industrial forces, to use an expressive but somewhat unusual term, are simply managerial, and possess no despotic habits. But as we hold that political centralization is in part objectionable because it absorbs and emasculates the individual, may it not also be

true that the consolidation of capital may be objectionable for a corresponding reason? Will we not finally discover that the annihilation of numerous boards of directors, and the absorption of plants operated by individuals and partnerships, has ended not only in the delay of our material progress but in the decay of individual efficiency?

This suggestion may possibly lead to the further suggestion that all incorporation is an absorption of the individual; and it might be maintained that, if very large incorporated companies could be damaging, the smaller companies must be damaging also, the difference being only a difference of degree. But this would not quite follow. A little arsenic makes a good medicine. It is the excess that kills. Incorporation has been made a modern necessity. It is necessary for the protection of liberty against the encroachments of excessive government at a time when the requirements of our civilization demand the prosecution of enterprises beyond the strength of individuals. It is so vitally necessary, indeed, that it may be said that republican government could not be permanently maintained without it. But the question recurs here if it should ever be carried beyond merely industrial requirements. When thus limited, it fails to develop any of those objectionable features which obviously take form the moment when it is made a social force, and set at the solution of social problems.

This clears the way for an answer to the question whether the consolidation of capital as a substitute for trusts would promote or retard our industrial prosperity. The trusts, it will be seen, did not interfere with what might not inaptly be characterized as the local self-government of corporations. It displaced no boards of directors, clipped the plumes of no individual operator. It was merely an application of the principle of coöperation in finance. True, it might to a certain degree have relieved the individual and the managers of the smaller and weaker corporations of the necessity for personal exertion, but not to the degree that would be likely to produce paralysis or indifference. It simply enabled them to escape the worst consequences of their failures; but it neither withdrew them from their field of activity nor silenced the promptings of personal pride and ambition. They were still left to be the architects of their own fortunes, and their trust did no more than strengthen the scaffolding on which they stood while rearing the walls.

Here is the weakness of the single corporation created from a great number of smaller corporations, and seeming to hold an entire industry under its almost absolute control. It will undoubtedly have some advantages. It can adjust the supply of its manufactured merchandise to the demand, and, equally with the trust, it can help to avert the dangers of panic and financial disorders. But this will be an advantage likely to be won at a great sacrifice. The managers will be less alert than when prompted by competition in their search for improved processes of production, or an improved quality or style of goods, and the industry which any colossal corporation represents will soon become grooved in an established formula against which it would be heresy to suggest any improvement.

Added to this will be a further disability caused by the clamor of stockholders, who believe that the managers absolutely control the market, for large dividends; and this clamor will have sufficient potency to compel market charges which may or may not be justified by the cost of production. This will be a disability, however, from which the public that opposes trusts, but which is confessedly helpless against consolidated companies, will be certain to suffer more than the stockholders.

But then, again, there will be another feature of the subject to consider. The movement cannot be quite conclusive. In suggesting that the consolidation of many small companies into one single great company will paralyze personal enterprise, and operate to the disadvantage of industrial progress in invention, it is not meant to be said that the movement can be entirely successful in bringing about these unfortunate results. It can only tend in this direction. The era of higher prices which consolidated companies will inaugurate must bring also new allurements for competition, and promote the formation of many new companies which will see in the promised stability of prices a very auspicious opening for enterprise. Certain companies refuse to enter into these large combinations. Why is this true? Men gifted at mind-reading will know that it is because the managers are shrewd, and see that the large company will prepare the conditions that will leave nothing to be desired for their own independent success. The invitation for the organization of new independent companies will therefore be apparent.

The ideal of a sound industrial condition is represented in the conception of competition regulated by combination. This is a conception which offers full play to the best energies of men, and, while keeping them mentally alert, enables them to work out their industrial problems free from the shadow of possible or impending bankruptcy. The operations of men will never be carried forward on a perfectly secure foundation until this conception is organically realized in every department of industry and trade.

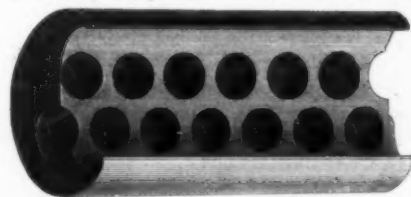
It will be a happy day for the world when its industries can be relieved from the malign influences of the political regulator, rarely intelligent and never completely honest, and placed under the control of the exclusively industrial manager, whose views are generally practical and comprehensive. But in the meantime, while waiting, can we not act more wisely than we act when forming corporations vast enough to seek the control of entire industries? The courts have decided that the trust is not according to law. Then so much the worse for the law; and would not the course of wisdom be found in working for an amendment that will no longer permit such laws to remain not only an economic obstruction but a barrier to our social progress? It may go hard, but it ought not to be difficult to procure a legislative declaration that the law as it is at present construed was not meant to be an obstruction to those business men who are really our best philanthropists. It is after sundown now and about twilight for the day of crazes. Homestead and Buffalo have brought us face to face with their significance, and prepared the way for a good night's rest and the coming of a brighter morning.

NEW GOODS AND SPECIALTIES.

IN the cushion rim and tire, for bicycles, invented by C. E. Duryea, the aim has been to secure the nearest approach to the resiliency and speed of the pneumatic tire that is possible without the use of an air-tube, with its liability to punctures. Practically it is the Δ section tire which inventors have so long sought to produce, but instead of the rim getting a cementing surface on the rubber by extending up the side of the tire part way, as in the Δ tires heretofore made, the rubber has lips extending down into the rim, which is provided with grooves to receive the lips. [Figure 1.] This leaves all the tire proper up and above board, so that it has no dead rubber at all. It cannot cut on the edges of the rim, for they are lower than the rim proper. It cannot be torn off, for no strain can reach the edges of the lips. Another feature of interest is in the method of securing the cushioning properties. If a tube is laid on its side and a load applied, it is not truly compressed—it is bent or flattened out of shape, whereas if it is set on end, it actually compresses. In the first case more rubber is required to support the same weight, and the constant flattening will in time break even rubber. In the second case, there is no flattening and the hole provides



CRESCENT CUSHION TIRE—FIG. 1.

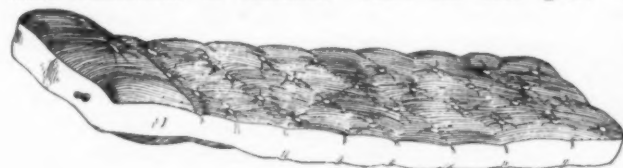


CRESCENT CUSHION TIRE—FIG. 2.

room into which the rubber may compress, so that the amplitude of compression is increased with no loss of resiliency or durability. By honey-combing the tire on its under side with two rows of alternating holes, the effect is secured of a large number of tubes on end. [Figure 2.] The saving in weight from this method is such that a pair of tires of this style, $1\frac{1}{2}$ inches in size, will weigh but $5\frac{3}{4}$ pounds, whereas if made in hose-pipe fashion of the same exposure of rubber, they would weigh from ten to twelve pounds according to their composition. The large tires made under Mr. Duryea's patent are lighter, therefore, than the smallest of those most generally used. The advantages of a large cushion tire are many. It will ride with ease over sand, mud, and dust that smaller tires cannot be forced through. The two cuts herewith show the $1\frac{1}{2}$ -inch tire at two-thirds the actual size. These tires are used on the wheels made by the Rouse-Duryea Cycle Co., Peoria, Ill.

A New Camping Mattress.

AIR-MATTRESSES have long been recommended as the most comfortable in existence. There has been great



A NEW CAMPING MATTRESS.

trouble in the past in manufacturing them so that the bed may be soft, and yet be plump and square in all parts. The problem seems now to have been very successfully solved by the manufacturers of a new camping mattress. It makes a bed that is perfectly clean and will always be free from vermin or unpleasant smells. It cannot retain the moisture or heat from the body, nor does it cause perspiration. Aside from this it is impossible to invest it with the germs of any disease, thus making it the most healthy and desirable bed in the world. Further than this it requires no springs, and the firmer the foundation the easier the bed. For camping the mattress is so arranged that, when not in use, the air can be let out, and when rolled up and fastened with a shawl-strap, it makes a bundle no larger than an ordinary traveling blanket. It is the ideal mattress to use in the woods, as the earth-dampness cannot penetrate it, and it is so light and portable that it can be taken anywhere. The best of materials are used in making it. The air sack is of stout cotton duck heavily coated with a high grade of rubber compound, which is vulcanized after the sack is made. In these days of pneumatic tires there is no reason why the tired should not sleep on pneumatic beds, and many are doing it. Manufactured by the Metropolitan Air Goods Co., No. 7 Temple place, Boston, Mass.

The "B. W. H." Hose-Rack.

THERE is such a variety of hose-racks in use in mills, warehouses, and stores that it hardly seems possible that any new points that would be of advantage could be incorporated in such an appliance. The "B. W. H." rack, however, shows

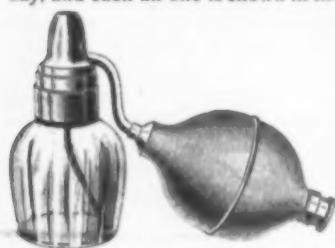


THE "B. W. H." HOSE-RACK.

a departure from all the old types in the simplicity of construction, that will at once appear to all practical men. To begin with the rack is made so that there is no chance of its getting out of order or breaking, and its capacity is almost unlimited; for one can readily see that it will hold as much hose as one wishes to place in position. It has a further advantage of allowing the hose to run freely when the line is being pulled off. In the simplest hose-racks heretofore, there have been times when the hose would catch on the corners and the user would be obliged to drop the nozzle and return to the rack to free it, before he could go ahead with the line. As time in such cases is of the greatest value it will be seen that the new rack has a decided advantage over others. The "B. W. H." rack is exceedingly attractive,—far more so than it appears in the accompanying illustration, as the artist has not done justice to the neat effect that is secured when the hose is folded over the curved top. Manufactured by the Boston Woven Hose and Rubber Co., Boston, Mass.

The "Tyrian" Oil-Atomizer.

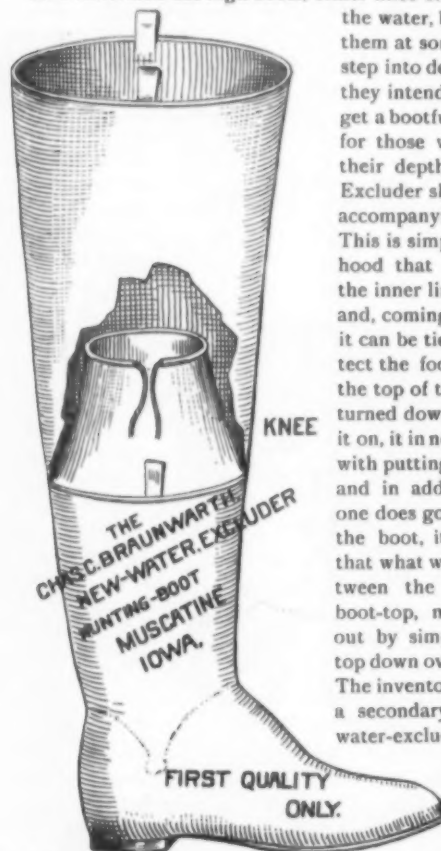
A MEDIUM-PRICED oil-atomizer is called for by the trade today, and such an one is shown in the accompanying illustration.



The "Tyrian" is made to spray any of the heavier or lighter oils, vaseline, albolene, etc. It throws a very strong spray by means of the large opening, can be worked with one hand, and will effectually reach any part of the throat. The neck being both screwed and cemented, it is impossible for it to get out of order. At the same time it can be taken apart, leaving the cap secured in the top of the bottle. The rubber parts are made of first quality white stock, and in design and finish it strikes one as being one of the best oil-atomizers yet put upon the market. Manufactured by the Tyer Rubber Co., Andover, Mass.

Braunwarth's Rubber Water-Excluder.

ALL fishermen use high boots, either knee or hip, to keep out the water, but almost all of them at some time or other step into deeper water than they intend and as a result get a bootfull. A new idea for those who go beyond their depth, is the Water-Excluder shown in the accompanying illustration.

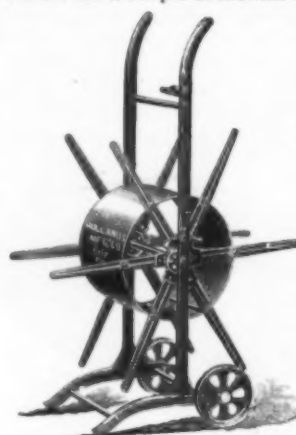


its office in the rubber boot. This Water-Excluder weighs but three ounces, and can be attached to any boot, costing but 25 cents extra. They are used not only for fishing, but also for hunting-boots, and are also made in short boots for farmers and teamsters. They are said to absolutely prevent wet feet, and they will keep snow, rain, and seeds from sliding down the rubber coat into the boot. The inventor is Charles C. Braunwarth, Muscatine, Iowa.

This is simply a waterproof hood that is attached to the inner lining of the boot and, coming over the knee, it can be tied so as to protect the foot and leg. As the top of the boot can be turned down before putting it on, it in no way interferes with putting the article on, and in addition to this, if one does go over the top of the boot, it will be found that what water has run between the hood and the boot-top, may be emptied out by simply turning the top down over the boot-leg. The inventor describes it as a secondary leg or pocket water-excluder, which phrase perhaps gives as full a description as is necessary to understand

The Hollands Hose-Reel.

THE season is near at hand when from the great factories in the West the cheerful hose-reel salesman starts out for orders. And when a couple of months later the car-loads of reels begin to arrive, even the wise

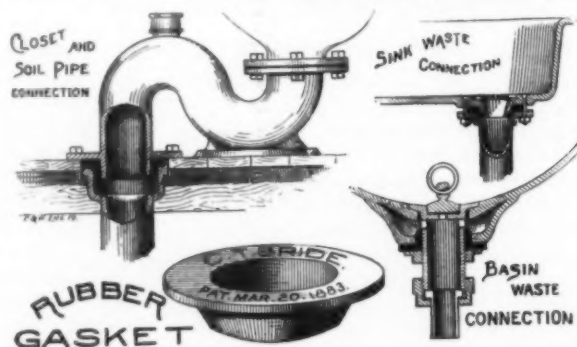


THE HOLLANDS HOSE-REEL.

der where all the reels go. Last year was the banner year in the sale of hose-reels above all others, but 1893 will go ahead of it if the preparations now being made by the manufacturers are any sign. Of the reels that are now marketed none have more strong points than the Holland. It is a reel that has come to stay. Clumsy gardeners and mischievous boys fail to injure it, as it is made of iron. The smooth cylinder upon which the hose is wound is an ideal part of a reel and saves a deal in the wear and tear of the hose. The ordinary reel will hold 150 feet of hose, and as a matter of fact there is no reason why it should not last a lifetime. Made by the Hollands Manufacturing Co., Erie, Pa.

Rubber Gaskets for Use in Plumbing.

PLUMBERS, perhaps more than any other class of men, have to guard with exceeding care against leakages. The old-fashioned plumbers—and some of them are still in existence—used putty, plaster of Paris, or red lead, and thought that was the only way. The modern plumber, however, uses a rubber gasket and is thus sure that waste connections in the wash-basins and water-closets are perfectly tight, and not only this but he has a joint that can be taken apart again and again without injury.



What are known as the Bride Rubber Gaskets are now most in use. They are made for the basin waste connection, the sink waste connection and the closet and soil-pipe connection. They are found specially valuable in connection with earthenware basins as the irregularity of the opening and the care which must be taken in not fracturing the ware renders the making of a good basin joint an exceedingly troublesome affair. These gaskets are made of the best rubber, molded and vulcanized, and are for sale by Owen & Salter, Twelfth and Buttonwood streets, Philadelphia.

Wulfs Hose-Fastener.

IN the cuts herewith is shown an appliance in the shape of a hose-fastener which has the merit of being always in readiness for use, of being easily worked, having absolutely tight ties, and

tying with equal success the largest and the smallest sizes. It can be used not only for fastening couplings to hose, but for various other purposes, such as tying up articles, putting bands around split tools in place of ferrules, putting hoops around pails, etc. The price is \$6, with enough wire to make about 600 hose ties. When these ties have been used it is not necessary to buy



J. F. WULF'S PATENTED HOSE-FASTENER.

new fasteners, but only new wire. The directions for the use of these fasteners are: "Cut off enough wire required for the tie, bend the same around the hose, place wire into the cams, draw up as tight as required, twist once around, cut off superfluous wire, and hammer down ends with machine." Mr. Wulf is the secretary of the company manufacturing this article,—The Robert Rom Co., Nos. 130-140 Second street, Milwaukee, Wis.

The Combination Shoe-Lift.

THERE has been placed upon the market recently a combination shoe-lift, consisting of the attachment of a clip to the ordinary form of shoe-lift. It is designed especially for pulling on ladies' rubbers. The salesmen now have to pull on the rubbers

with their fingers, and as the ladies are always particular about having a snug-fitting rubber, very often the salesman's fingers slip and they break the finger nail or otherwise hurt the finger. In the two illustrations which accompany this paragraph Figure 1 shows the lift with the clip on the back raised to catch hold of the rubber. Figure 2 shows the device attached to the rubber itself. It is a small article which may be introduced advantageously by the retail dealer. It is offered to the trade by Edward E. Spencer & Co., No. 34 Warren street, New York city.

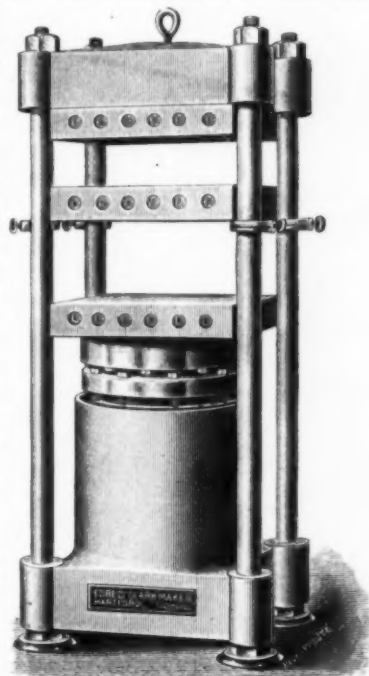


FIG. 2—THE LIFT APPLIED TO THE SHOE.

Clark's Hydraulic Press.

THE hydraulic press for rubber mold-work for electric installations, shown in the illustration herewith, has for its principal object the securing of the strength necessary to sustain

the great pressure that may be put upon it, in as compact a form as possible. The cylinder and case are cast in one piece of very strong and close iron, in dry sand, rendering it impossible to spring. The base of the press being flat on the bottom, it can be set on the floor or any plain foundation without building a pit for the cylinder. This is designed for any mold-work, of either rubber or other insulating substances. The placing of several steam-plates one above the other, as shown in the cut, will be found very advantageous where many molds of the same kind are used. The inventor and manufacturer of this press is Edred W. Clark, No. 31 Wells street, Hartford, Conn. Having built recently a large addition to his shop, he is now prepared to furnish estimates on presses of any size, either screw or hydraulic, as cheap as is consistent with good quality of work and material furnished. He is now building three sizes of tube machines which are giving good satisfaction especially the new design as shown in the cut, driven by spur and bevel gears. Recent orders have been filled for the Washburn & Moen Manufacturing Co. of Worcester, Mass., The American Electric Works, of Providence, R. I., and Pirelli & Co., rubber-manufacturers of Milan, Italy. He is now building a No. 3 press for the Mechanical Fabric Co., of Providence, R. I. More than a hundred of his machines are now in operation in this country, Canada, England, Spain, and Italy.



CLARK'S HYDRAULIC PRESS.

"Red Cross" Cementing-Needles.

THE "Red Cross" cementing-needle is a simple, neat, and successful tool for repairing pneumatic tires. It is necessary only to force the needle through the puncture in the tire and slowly extract it; "Red Cross" rubber cement does the rest, to quote from the manufacturer's announcement. The operation need not consume more than three minutes. The mender consists of two slotted needles, one large and one small. The directions given are: "See that the little check is next to base of needle. Then fill slot with cement, force needle into puncture nearly up to check, being careful to follow same course through tire as that made by instrument causing puncture. Hold little check firmly against tire and slowly extract needle."



Repeat process if bad puncture. After extracting needle, revolve wheel until punctured part of the tire rests on ground or base of wheel. Allow cement to set for three to five minutes before inflating tire." Price each, large, small or medium, 35 cents; price, per pair, 50 cents. They will be sent postpaid. Manufactured by A. U. Betts & Co., Toledo, Ohio.

The "Montrose" Waterproof.



THE "MONTROSE" WATERPROOF.
made. Made by the Clifton Manufacturing Co., Boston.

IT is not every lady, stylish though she may be, who likes the full military cape on a mackintosh. For those who do not has been designed the half-military cape, well shown in the "Montrose." A feature of this cape is that it is made a part of the garment, and cannot be detached from it. This is as it should be, as the garment is sleeveless, and would never be worn without the cape. That it may be closely drawn about the form there are the usual tapes at the waist, and in addition to this, a skill in draughting the pattern that makes it an exceedingly well-fitting, stylish, and graceful garment. The collar instead of setting close to the body of the mackintosh, is set on a band, making it fit more smoothly and also set up high in the prevailing style. This garment is made single- or double-texture, from any one of hundreds of the latest patterns of cloth. The button-holes are worked in silk, and the buttons are usually covered with cloth similar to that of which the garment is

A Stylish New Rubber Shoe.

THE Colchester Tennis has been well called one of the most tasteful shoes ever put upon the market. Fashions in rubber



A STYLISH NEW RUBBER SHOE.

shoes follow close upon the fashions in leather footwear. Taking the best shapes in leather goods as a standard, it will be seen that the new shoe here illustrated in no way falls short of its beautiful models. As the eyelet pieces are made of leather, there is added to great durability an exceedingly elegant finish. The patent leather contrasted with the black cloth upper, and its harmony with the bright rubber fixing gives an effect that has long been striven for by rubber-shoe men. The diamond toe top is in line with the latest style in the better class of leather footwear for ladies and is original with the manufacturers of the Colchester and exclusively used by them. Manufactured by the Colchester Rubber Co., Colchester, Conn.

A Life-Preserver of Rubber.

A PATENT has been granted in England (No. 13,259—1891) for improvements in life-preservers, for floating or sustaining persons in the water, the inventor being Alois Zadak, of Budapest, Hungary. The object of this invention is the production of an apparatus which, in the case of accidents on the water, by the reason of the small space it occupies and its light weight, may be constantly worn on the person whenever there is any fear of danger. It may be made ready for use in a few seconds and it may also be employed for military purposes, as by the use of the same rivers may be crossed without any necessity of bridges or other engineering appliances. The preserver consists of an upper and lower air-bag made of India-rubber or other material, which, by means of a small rubber pipe, connect one another. Air-admission pipes, which are provided with a cock, serve for the introduction of the air. The light apparatus may be sewn in the lining or otherwise introduced under the clothing, or it may be simply hung on. The mode of using the apparatus consists in blowing air into the air-bags through the pipes whenever any reason for the use of the same seems necessary.

Minor Mention.

A SOFT-RUBBER cushion attached to the receiver of a telephone makes an agreeable rest for the ear, and at the same time shuts off all external noise from the room. The cushion can be inflated by means of a small tube.

—A Southern lady—a Mrs. Galliard—is about to attempt to revolutionize the dress-shield business. She has noticed that the membrane that lines the stomach of an ox, a waste material at present, is waterproof on one side and on the other an absorbent of moisture. Her plan is to make dress-shields of this substance and to drive the rubber article out of the market. She has secured a good patent but thus far has not produced a perfect shield. It is indeed a question if a seamless shield can be made from this material. She has a great deal to overcome in attempting to make an article of this kind popular, for at the present time dress-shields of rubber are made very perfectly and give universal satisfaction.

—An invention of Mrs. Galliard's that is more practical is a carriage telephone. This is merely a speaking-tube of rubber wound with silk that permits the occupant of a closed carriage to speak with the driver without thrusting the head out of the window.

THE manufacture of smokeless powder was handicapped for some time because of the injurious effects upon workmen. An inventor has however perfected a rubber mask which the men now wear, so that the fumes cannot enter the lungs and there is no further danger.

BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

AMONG recent patents issued by the United States Patent Office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully:

RUBBER BOOTS AND SHOES.

No. 405,302.—Fastener for Rubbers. Louie A. Sherman, Peoria, Ill.

A fastener for overshoes, comprising an upright piece rigidly attached in the heel of an overshoe, a clutch rigidly attached at its upper extremity of the upright piece, its lower extremity fitted to engage and springing into engagement with the inshoe, and a fender movably attached over the clutch

PLUMBING SPECIALTIES.

No. 485,551.—Filter. Thomas T. Luscombe, Carthage, Mo., and William O. Luscombe, Chicago, Ill.

A water-filter consisting of a block of tripoli-rock having a large interior opening or chamber with a contracted outlet, a plate secured to the block and having a perforated threaded neck, and a flexible hose connected to said plate by a threaded nut.

DENTAL SUPPLIES.

No. 485,963.—Rubber-Dam Clamp. Christian A. Meister, Allentown, Pa.

In a rubber-dam clamp having gripping-jaws united by a closing spring-piece or portion in their rear, the jaws provided with separate and attached fingers arranged to extend back of or beyond the closing-spring portion of the clamp, and the one of which with its attached jaw is made adjustable in direction of its length up or down.

DRUGGISTS' SUNDRIES.

No. 485,396.—Atomizer. Charles L. Morehouse, Brooklyn, assignor to McKesson & Robbins, New York city.

In a vaporizer the combination, with an air-forcing tube having a side aperture, of an ejector-tube connected with said air-forcing tube and a vessel into which said ejector-tube projects, which vessel has a pin-aperture in its top end adjacent to the side aperture of the air-forcing tube.

No. 485,698.—Duplex Syringe. Frank S. Ketchum, New York city.

In a syringe the combination of the liquid-receptacles, the flexible and elastic tubes connected therewith, the frame through which said tubes pass, the key journaled in said frame and provided with radial flanges, and the Y-shaped connections provided with a flexible tube having an injection tube.

ELECTRICAL APPLIANCES.

No. 486,807.—Electrical Hose Signaling Apparatus. William Fowler, Colorado Springs, Col.

In a hose signaling-apparatus, the combination of a source of electricity, a circuit composed of three wires which are attached to the hose, a bell or other signaling device located at each extremity of the line of hose and within the circuit, a third bell or signaling device intermediately located and connected by means of branch wires with the wires of the main circuit, and a push-button for each bell or annunciator, the elements of the apparatus being so arranged and connected that by pressing any button all the bells are simultaneously sounded.

No. 486,212.—Circuit-Controller. Harry W. Leland, Jersey City, N. J.

A circuit controller comprising a sheet or disk provided with one or more rubber or similar elastic ridges or protuberances formed on its surface and circuit-controlling contacts embedded in the sheets and its ridges, respectively.

MECHANICAL RUBBER GOODS.

No. 486,706.—Caster. Harrison H. McElhiney, Nebraska City, Neb., assignor to the McElhiney Manufacturing Co., same place.

The combination of a solid wheel, perforated insulating-

packing passing through said wheel and extending beyond each side of the same, an axle passing through the arms of the shanks.

No. 485,747.—Weather-Strip. George W. Morris, Minouk, Ill., assignor of one-half to A. B. Klipp, same place.

The combination, with a door having a groove in its lower edge and provided with a socket, of stationary plates secured to the side edges of the door and provided with bearing-openings, a spindle journaled in the bearing-openings, an elastic roll mounted on the spindle and provided with a central bore considerably larger than the spindle to enable it to have a limited vertical movement; said roll being located in the groove of the door, a spring arranged above the roll and located in the socket, and a curved plate secured to the lower end of the spring and engaging the upper face of the roll to force the latter downward.

No. 486,620.—Tubular Woven Fabric. Benjamin L. Stowe, Brooklyn, assignor to J. Van D. Reed, New York city.

A multiply tubular-woven fabric in which one or more of the inner plies have a greater number of picks or crossing of warps than the others.

No. 486,621.—Tubular Woven Fabric. Benjamin L. Stowe, Brooklyn, assignor to J. Van D. Reed, New York city.

A compound tubular-fabric hose, consisting of a closely-woven or knitted and practically water-tight tube of linen surrounded by one or more loose-textured cotton-fabric tubes to give strength and body to the hose and at the same time to permit the passage of air and dampness.

TIRES AND ATTACHMENTS.

No. 485,540.—Valve for Pneumatic Tires. William E. Gibbs, New York city.

The combination of a hollow tire or other chamber adapted for the reception of compressed air with a combined valve and plug provided with an elastic packing or gland adapted to operate as a valve during the filling of the chamber and as a plug when permanently compressed longitudinally and expanded laterally.

No. 485,605.—Inflatable Tire for Vehicle-Wheels. Kirk Brown, Philadelphia.

A tire consisting of an inner tube composed of compressible or soft elastic material applied to the face of the rim of a wheel, a covering of tougher material surrounding and supported on the back of the rim by sectional rails provided with detachable clamping devices, and means for inflating said tire.

No. 485,633.—Cushion Tire and Rim Therefor. Robert M. Keating, Springfield, Mass.

The combination of a rim having its periphery lowest in the central portion with an elastic tire formed with a straight base portion, a raised outer portion, and with ribs extending from the one to the other.

No. 485,896.—Tire for Bicycle-Wheels. Thomas H. Sweeting, Philadelphia.

A tire formed of an exterior elastic tube having an angular contact outer face, a flexible inner tube, a liquid filling within said tube, and an absorbent material in said liquid.

No. 486,556.—Pneumatic-Tired Wheels. George A. Burwell, Toledo, Ohio.

The combination of the wheel-rim connected with the wheel-spokes and the clamping-rim external thereto, the periphery of which is longitudinally extensible, with the air-tube having a portion of its surface supported directly against said clamping-rim and the substantially non-extensible covering-strip inclosing the outer portion of the said air-tube and having its edges interposed between the edges of the wheel-rim and the clamping-rim, as described, said clamping-rim being contracted solely by the pressure of the air-tube against it, and thereby caused to grip the edges of the covering-strip between the edges of the clamping-rim and wheel-rim.

No. 486,500.—Inflatable Tire. Edward H. Seddon, Brooklands, England.

The combination, with a longitudinally-divided envelop of an inflated tire for velocipedes and similar light road-carriages, of a bridge-piece inserted into the edge of said envelop, a wire inserted into a loop formed on said edge and passing through the pierced lugs of said bridge-piece, and a coupling device for said wire between the lugs of the bridge-piece.

No. 486,542.—Elastic Tire. Preston Davis, London, England.

The combination, in a wheel-tire of an inflated tube with a protective wrapping, secured to rim, and an outer removable combined covering or jacket built up of spiral windings of tape, webbing, ribbon, or other suitable material on its inner side and India-rubber on its outer side, held in position on the under side of the rim of the wheel by wires and hooks.

No. 486,146.—Wheel for Velocipedes. Frederick Westwood and William H. Butler, Birmingham, England.

In a wheel the combination, with the rim having its side edge bent over inwardly towards the wheel center, thereby forming hollow chambers of the tire secured to the rim between the said chambers and the spokes passing through holes in the edges of the rim below the said chambers and through holes in the rim above the said chambers and provided with heads bearing on the rim close to the tire.

No. 486,191.—Wheel-Tire. Robert Edlin, Leicester, England.

A pneumatic tire for vehicle-wheels, consisting of an air-tube having closed ends, one end having a tubular extension into which the opposite end is received and tied thereto, an outer covering formed with one or more flaps provided with a series of marginal perforations adapted to fit over a similar number of studs on the wheel-rim, a metal plate, also perforated to fit over the said studs and be secured thereon by nuts or equivalent means.

DRY GOODS.

475,076.—Skirt-Elevator. Josephine Asten, Washington, D. C.

A dress-skirt elevator consisting of an elastic web having at one end a finger-engaging ring and at the opposite end a skirt-engaging device and a tubular sheath formed with transverse ruffles or flutes and inclosing the elastic web continuously throughout its length between the finger-engaging ring and the skirt-engaging device.

480,426.—Combined Corset and Dress-Shield. John S. Goldsmith, New York city.

A combined corset and dress-shield in which the body flaps of a pair of armpit-shields are provided with the flexible downwardly-extending connection portions secured at bottom to the corset, and the dress-shields are further provided with means for attaching the armpit-shields to the arms of the wearer, and means for adjusting the connecting portions for the required height of each armpit-shield above the waist of the corset.

480,523.—Skirt-Supporter. Georgia V. Smith, Princeton, Ill.

A skirt supporter consisting of an elastic band provided with the lever-like spring-clasp at one end for engaging the other end of the band, and a cord secured to the clasp for supporting and holding the band in position on the wearer.

MISCELLANEOUS.

480,083.—Waterproof Woven Snare-String for Drums. Emil Boulanger, St. Louis, Mo.

A snare-string comprising a number of strings of fibrous material weather-proofed, compressed and having applied to its smooth outer surface a coating of shellac or other resinous material.

480,934.—Acid-Resisting Composition for Lining Tanks. Joshua Norton, Jr., Chatham, Canada.

In an acid-resisting lining of a wood-pulp digester, a first or preparatory coating or layer composed of asbestos fiber, sulphate of baryta, and hydraulic cement and having a thickness of not more than about one-sixteenth of an inch, a second layer

consisting of the same ingredients mixed with pulverized fire-brick, seggar, stone-ware, and glass or glass-sand, and a third layer consisting of asbestos fiber, sulphate of baryta, and hydraulic cement, each layer containing silicate of soda.

481,485.—Waterproof Fabric. Joseph R. France, New York city.

A waterproof fabric consisting of a sheet of rubber, a sheet of fibrous material—such as thin paper—attached to the sheet of rubber, and a covering of pyroxyline compound secured to the sheet of fibrous material.

No. 483,309.—Window-Cleaner. Anthony L. Lewis, Evanston, Ill.

A window cleaner having a handle, a body, a flexible reservoir of impervious material secured thereto and having its working surface perforated, and a mass of bibulous material within said reservoir.

No. 483,367.—Cementing-Machine. William Robertson, Hamilton, Canada, assignor to James A. McPherson, same place, and Elbert D. Weyburn, Chicago, Ill.

An apparatus for storing and delivering fluids, comprising a storage-receptacle, a cylinder extending below the same, a passage on a line with the bottom of the storage-receptacle, leading directly into said cylinder, and a piston reciprocating in said cylinder and adapted to close communication between the said receptacle and cylinder.

No. 485,168.—Knife-Handle. John H. Bennett, Worcester, Mass.

In a knife handle, the combination with a knife and a shell forming the body of the handle of a pair of jaws having inclined sides by which the jaws are pressed against the edges of the blade, a screw having an interior chamber, and a slot opening into said chamber, the end wall of said interior chamber being conical, and said jaws and said screw being connected by means of the ends of said jaws entering the inner chamber in said screw and being expanded so as to rest against the conical end wall of said inner chamber, whereby the inner ends of said jaws are carried toward each other as they are moved lengthwise the handle, and an actuating-nut on said screw and acting against the end of the shell.

No. 485,940.—Pattern for Casting Brake-Shoes. William H. Kramer, Allegheny, Pa.

A pattern for brake-shoes, consisting of a rubber, clutch-pieces separable from the rubber and having outer faces inclining outwardly from the rubber, and a key-piece arranged to be inserted between said clutch-pieces.

No. 486,141.—Toy or Puzzle. Edouard De Virgile, New York city. Assignor to Adrien Bonnet, same place.

In a puzzle, the combination of three pieces of celluloid or similar thin tough flexible material of the shape and relative proportions described.

TRADE-MARKS.

No. 21,882.—Dental Rubber. Excelsior Rubber Works, New York city.

Essential feature, the word "Ideal"; used since February 15, 1892.

No. 21,924.—Certain Named Rubber and Leather Goods. Page Belting Co., Concord, N. H.

Essential feature, the representation of a crown and the word "Extra"; used since January, 1889.

No. 22,005.—Non-Heat-Conducting Coverings for Steam and Other Pipes and Boilers. The Magnesia Sectional Covering Co., Ambler, Pa.

Essential feature, the word "Magnabestos"; used since April 1, 1892.

No. 22,006.—Sign. Heinrich Traun, Hamburg, Germany.

Claim, the design for a sign showing a black hard-rubber comb.

No. 21,967.—Pneumatic Tires for Bicycles. Boston Woven Hose and Rubber Co., Boston, Mass.

Essential feature, the word "Evertile"; used since September 1, 1892.

INDIA-RUBBER SCRAP.

THE foreigner is becoming much exercised over the adulteration in the ordinary jar-ring, the English and Parisian firms being abused by the Germans for their shortcomings. An analysis of the French ring shows that two-thirds of it is composed of litharge. Some tins of Australian meat recently examined had rings upon them which contained the same proportion of red lead. The German has also moved on Vienna with about the same result. In his seeking for other worlds to conquer he will probably take up America, where he will find that the Yankee is selling a *pure* rubber ring for about 35 cents per pound and making a small living in so doing.

* * *

IN woolen goods there is a disposition among the leading agents to advance prices for the next season, which will hardly be relished by rubber-clothing men, and the latter with other interests will fight the advance. The market, however, is in excellent shape, with light stocks, with contracts for spring now being made. The season for heavy weights is now over.

* * *

A NEW YORK newspaper in describing the manufacture of waterproof garments speaks of the rubber in them as being *galvanized*.

* * *

THE Woonsocket Rubber Co. are endeavoring to keep up with the demand for articles by employing more skilled labor in that direction. This work is done at the Alice mill, which is now running nights to meet the demand.

* * *

IT is stated that a new rubber toy is to be brought from abroad this year; it consists of a submarine diver whose normal position is at the bottom of the water. In his chest is a rubber envelop which upon being inflated by pneumatic pressure through a piece of hose of minute proportions by means of another rubber ball on the outside, permits the diver to come gracefully to the surface amid the plaudits of the young possessor of the toy.

* * *

MR. CHARLES SPLITDORF, of New York, is much pleased with his new insulating compound. It consists of mica applied in strips strengthened by some non-conducting material, such as paper or cotton. Heretofore it has been difficult to apply mica to wire-covering, as it flaked so badly. By this new method, however, the wires are said to be finely insulated and possess considerable durability.

* * *

A CEMENT for bicycle-tires is made of two pounds of asphalt and one pound of Gutta-percha. These are melted together and applied hot to the wheel, after which the tire is applied in place. It is said to hold excellently.

* * *

SHOES with goring on the side were made in England as early as 1836, and at first were a combination of wire and rubber. Queen Victoria, who was then in her teens, wore them, and a Countess called them "lazy boots." The goring was variously made and successively called "prunella," "Italian cloth" and "stocking net." It was afterwards adapted to men's shoes, and at the beginning of the civil war in this country the Congress shoe was the fashionable one. The webbing used in this country was made abroad until 1876, when factories were started here. It is now made so well that it will outwear the shoe itself.

THE claim that electricity causes the tides is thus demonstrated: After electrifying a rubber comb by passing it through the hair, it is drawn over a glass filled with water, and as a result a distinctly-marked tidal wave follows the course of the comb.

* * *

PLUMBAGO, or graphite, has long been used largely in rubber-manufacture, and a new use for it is in the manufacture of insulating materials. For this purpose the graphite should be very pure, and mixed either with rubber or with some other equally good non-conductor. A number of electrical companies are considering the use of graphite in connection with rubber and other gums.

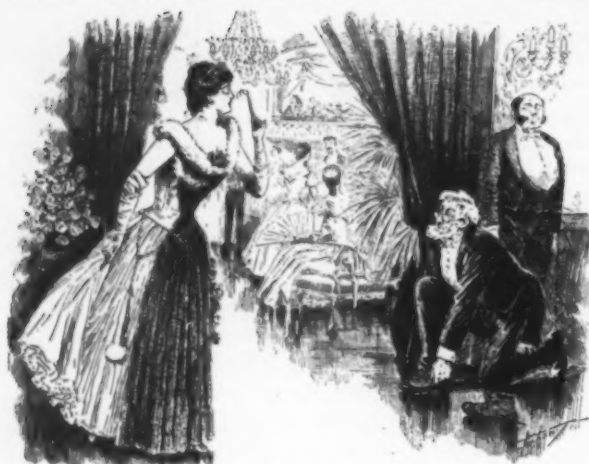
* * *

A NEW scheme for walking on the water has been gotten up by a Western inventor. His plan is to have three floats of rubber cloth that can be inflated with air, from which spring three braces which meet at a central point on which is placed a saddle. The man seating himself in this saddle has one float in front of him and two others in the rear, and with a pair of oar-like paddles on his feet is able to propel himself about in the water and can either fish or shoot ducks with the greatest ease. It is said also that a Japanese inventor has lately perfected a foot-gear of India-rubber, iron, paper, and wood, elliptical in shape, having Gutta-percha tubes and life-belt attached. With this a man is able actually to walk upon the water and can make about five miles an hour and carry twenty-five pounds of baggage. An inventor in Cleveland has invented a tricycle, the spokes in the drive-wheels of which are paddles, while the little wheel, covered with sheet-iron, or a web of rubber-covered cloth, serves as the rudder. Underneath the axles, and about four inches from the ground, are four pontoons about six feet long and two feet apart, like the hulls of a catamaran. This machine can be run on land or water. On land it goes a little less rapidly than the ordinary tricycle, and on water may be propelled as rapidly as a row-boat.



A HARD-RUBBER GUN.

LONG SILE (the stage-driver)—"Come out here a minute, Scars."
SCARS (the cowboy)—"Can't jest now podner. This stranger's got th' drop on me with th' infernalist gun you ever see."
[FROM "PUCK."]



A NEW USE FOR RUBBERS.

HOSTESS—Why, Uncle Silas! What are you putting on your rubbers for?

UNCLE SILAS—Wal, I've been on one of them parquay floors before, an' nearly broke my neck; so I'm goin' to come well-heeled this time.

[FROM "PUCK."]

A CORRESPONDENT inquires what the elastic swamp gum is, spoken of in a lumber paper. The swamp gum is nothing more or less than a gum tree, the lumber from which is extensively used in the manufacture of berry-boxes. The wood is boiled, and by the use of proper instruments, drawn out into ribbons. As it cuts like cheese, and yet is very elastic, it is well adapted for this work; but it is not India-rubber, nor anything like it.

AN inquiry comes from a large rubber concern asking how dental-dam can be recovered. There is at present no way of recovering thoroughly vulcanized pure rubber. About all that can be done with it is to grind it to a powder and use it as a filler.

RUBBER compounded with pepsin may not seem to be a specially valuable mixture, yet in chewing-gum it is quite a success. The rubber used in these goods is not old rubber boots and shoes, as the newspapers claim, but a gum that comes from South America and known as chicle.

RUBBER belting has been made for about fifty years, and found its inspiration in the difficulty of using leather in paper-mills and dye-houses. Joined ever so nicely, the leather belting would separate into its parts where cemented, and at that time and since no cement has been found that would stand that sort of usage. The best minds have been devoted to the processes of making these belts, both in the United States and England, some patents dating as far back as 1836, but the belt itself never was protected by patents.

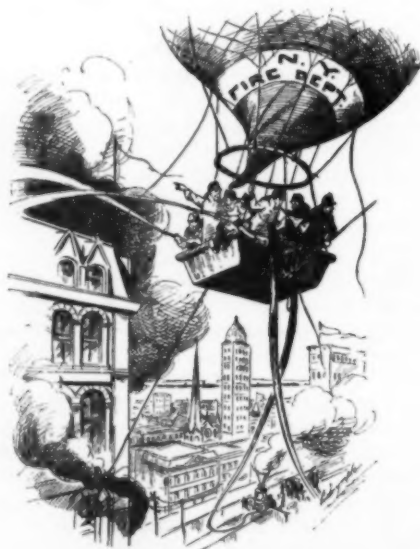
THERE are several sorts of valves for pumps, each having a special adaptation. Soft valves are used only for cold water. These are made with a perfectly smooth surface, the best having a light gravity. Another grade is for marine pumps and a special kind is made for severe service. Medium-hard valves are good for tepid water or that of a moderately hot temperature. The hard valves are for oily water of a very high temperature, and have several grades. Valve balls should have a perfectly round, true surface.

WHEN the mail-bag catches, which are attached to express trains, were first applied, some little difficulty was experienced in getting an apparatus that would stand the shock of the sudden jerk as the bag was whirled from its place. With the rubber spring as now placed upon the bag there is no more trouble.

AN artificial-ivory compound is made of eight parts of shellac and thirty parts of strong ammonia, which is agitated for some hours in a close vessel. When thoroughly in solution this is mixed with thirty parts of zinc oxid, the ammonia being expelled by heating. The residue is then pressed into shape at a high temperature, say of 590° to 600°.

THE seat of the cloth industry which yields the material from which rubber cloth is made is in Rhode Island and south-eastern Massachusetts. Some of the mills have as much as \$1,000,000 capital. It is seldom, however, that one firm devotes its attention exclusively to the wants of rubber-manufacturers. The varieties of cloth which go to the rubber trade are numerous, consisting of cotton cloth as low as five cents per yard; wool at 45 cents and upwards, and silk at \$1.25 per yard. Rubber-men are continually asking for better grades of goods, with exceptional requests for something a little cheaper than yet known.

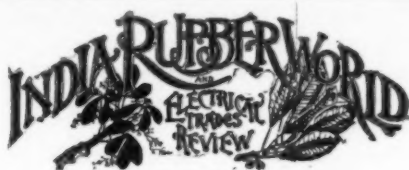
THE Gutta-percha tree bears a fruit about an inch long, ovoid in shape, which is eaten by the natives. In Siak, Sumatra, a vegetable butter is prepared from the seeds of this fruit. The trees attain a height of from sixty to eighty feet, with a diameter of from two to four feet. The wood is soft, fibrous, spongy, of a pale color, marked with black lines, these being the reservoirs of the Gutta-percha. The yield of a well-grown tree of the best variety is from two to three pounds of Gutta-percha, such a tree being about thirty years old, thirty to forty feet high, and one-and-a-half to three feet in circumference.



IT WILL BOOM THE FIRE-HOSE BUSINESS.

We will have to come to the Balloon Brigade, if the mania for tall buildings continues.

[FROM "PUCK."]



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TABLE OF CONTENTS.

	PAGE
SETTLEMENT OF THE CONGO RUBBER TROUBLES.....	63
With Map.	
A VISIT TO THE RUBBER REGION OF PERU.....	66
<i>J. Orton Kerbey.</i>	
THE PARA RUBBER TRADE FORTY YEARS AGO.....	65
<i>R. M. Everitt.</i>	
WAXES, GUMS AND RESINS USED IN INSULATING WIRE.—II.....	67
<i>Frederic A. C. Perrine, D. Sc.</i>	
THE CONSOLIDATION OF CAPITAL.....	69
<i>William Nelson Black.</i>	
NEW GOODS AND SPECIALTIES (Illustrated):	
The Crescent Cushion Tire.....	71
A New Camping Mattress.....	71
The "B. W. H." Hose-Rack.....	72
The "Tyrian" Oil-Atomizer.....	72
Braunwarth's Rubber Water-Excluder.....	72
The Hollands Hose-Reel.....	72
Rubber Gaskets for Use in Plumbing.....	72
Wulf's Hose-Fastener.....	72
The Combination Shoe-Lift.....	74
Clark's Hydraulic Press.....	73
"Red Cross" Cementing-Needles.....	73
The "Montrose" Water-proof.....	74
A Stylish New Rubber Shoe.....	74
A Life-Preserver of Rubber.....	74
Minor Mention.....	74
BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.....	75
INDIA-RUBBER SCRAP.....	77
With three Illustrations.	
EDITORIAL:	
The Secrets of the Rubber-Mill.....	79
The Future of the Congo Rubber Trade.....	79
Not a Rubber Shoe Monopoly.....	80
Our Rank as Rubber Consumers.....	80
THE "INDIA RUBBER WORLD" IN AUSTRALIA.....	81
THE LOCATION OF A RUBBER FACTORY.....	82
<i>I. A. Sherman.</i>	
HOW STOCK COMPANIES ARE COMBINED.....	83
<i>Robert M. Dean.</i>	
THE MANUFACTURE OF RUBBER TOY-BALLOONS.....	84
SHORT TALKS WITH THE RUBBER TRADE.....	85
RECENT DEATHS OF RUBBER-MEN.....	86
THE TRADING IN RUBBER STOCKS.....	88
<i>Howard Irving Smith.</i>	
TRADE AND PERSONAL NOTES.....	89
REVIEW OF THE RUBBER MARKETS.....	93
HISTORY OF A SOUTHERN RUBBER HOUSE.....	95
<i>Wm. H. Corner, Jr.</i>	
MISCELLANEOUS:	
Mr. Apsley's Election to Congress.....	81
A Decision Relating to Trade-Marks.....	87
The Rubber Trade of France.....	92
Syringe Goods Wanted in Australia.....	92
The Rubber-Mat Infringement Suit.....	96
They Will Exhibit at the World's Fair.....	96
Rubber Imports and Exports for October.....	96

The Secrets of the Rubber-Mill.

TO many the secrecy of the manufacture of rubber goods may appear absurd, the question being raised why an analysis could not be made of an article and the ingredients as well as the relative quantities ascertained. The diffusion of chemical knowledge, considering the age of the science, has been of slow progress, and the field is so broad that there are few who can devote the time to the analysis of rubber compounds. Besides, something more than analysis is required, for, in the various processes, substances and fluids are used which evaporate or pass entirely away, and the chemist must stand very high in his profession who can always divine what has been used. In fact he would have to turn his attention to experimenting, and take the same steps which the factory-man has already done. Manufacturers are constantly beset by persons for samples of this or that compound, and they are freely given, although it is firmly believed at the time that they are for purposes of analysis, but it is seldom that any results follow to the injury of the donor.

The Future of the Congo Rubber Trade.

THERE is published in this paper to-day the first of a series of articles on the rubber supply of the Congo region, in Africa, which is timely at this point because of the promise which exists that the rubber output of that region is soon to be largely increased. The universal testimony of African explorers who have given any attention to the matter at all is that the interior of "the Dark Continent" abounds in rubber-bearing plants no less than the great Amazon valley. In the Congo basin alone there are thousands of miles of navigable waters, needing only some slight engineering exploits to enable them to be brought into close contact with the world's transportation routes. Engineers are already at work, backed by sufficient capital to assure the successful carrying out of their plans. At the same time commercial companies have been organized to take advantage, at the earliest possible moment, of the new facilities which will be afforded by the improvement of transportation on the Congo.

The effect of these discoveries—which are practically new to our country, though long known to geographers and scientists on the European continent—will be, as soon as advantage can be taken of them, to lessen the cost of crude rubber, improve the average quality of rubber-manufactures, and to extend the use of those comforts and conveniences of life which are possible only through the use of rubber. Nor is this the only consideration of interest. To-day the only commodities which Central Africa can market with profit at a distance are ivory and rubber, the latter of which will soon, in the nature of the case, become the more important. With the increase of the rubber output, therefore, will grow the purchasing power of the African countries, and rubber will become the chief basis of all their commerce, other than the paltry local barter. It is rubber that is to open this hitherto sealed country to commerce and civilization.

Already the African rubber trade is larger than most of us—having in mind all the while the Pará trade—realize, and this without the development of the Congo region. For example, England imported direct from Africa, during the two years 1890 and 1891, no less than 12,710,320 pounds of crude rubber. Germany imported from African ports during the first seven months of last year 728,640, while the imports during January-July, 1892, were more than twice as large, or 1,486,100 pounds. Having no direct trade with Africa, the United States does not make an important showing in the imports of African rubber, since the greater part of what is received from that country is credited to Hamburg or London or Liverpool. It is possible, however, that no less than 6,000,000 pounds of African rubber per year are now received in the United States, or about one-sixth of our whole imports.

There is ample reason for American traders and manufacturers, while watching with interest the fuller opening of the Amazon country, not to overlook the rapid growth that is certain to come on the Congo.

Not a Rubber-Shoe Monopoly.

THE operation of the new great rubber-shoe combination will be regarded with interest in a circle much wider than that embracing the rubber industries alone, and the results doubtless will prove it to be the most interesting experiment in industrial consolidation that our country has yet seen. The combination differs from many others of its class in that it was not formed to bolster up a crippled business; or to enable the former owners of the business to retire with well-lined pockets; or to provide impecunious promoters with funds at the expense of the public; or to furnish employment for the capital of investors unacquainted with the business to be conducted. Instead of depending for strength upon "has beens," or people who have only their names left as capital, the new company is composed wholly of active and experienced members of the rubber trade or of financiers who are identified with some of the most successful enterprises in New York and Boston. Nor is the success of the company contingent upon the control of the whole production of rubber shoes. In other words, it is not a "trust," in the sense in which our people have learned to use the word, organized to control prices or to force competitors out of the market.

What the United States Rubber Co. really is may best be understood by considering it as a single manufacturing corporation, suddenly brought into existence full-fledged, with an established demand for its products, prepared to compete upon favorable terms with the old-established and successful Boston Rubber Shoe, Woonsocket, Colchester, and other companies. The men who have made a reputation for the brands of goods that it produces and the other men who have found buyers for these goods in the past will continue at their posts, and it is not reasonable to suppose either that the quality of the product will be lowered or that prices will be so increased as to give competitors any comfort. The real advantage of the combination is that which is gained in the transportation business

by connecting several short local railroads into one important trunk line. The addition of a large amount of capital through the public subscription to the stock will be of great assistance, of course, in carrying out the purposes of the new concern.

The conditions of the rubber-shoe trade now point to a larger production for home consumption, a bigger foreign demand, better and handsomer shoes, lower prices, more satisfactory methods in the trade, and better profits for manufacturer and dealer. While the tendency of the new corporation and its methods will be in the direction of these desirable changes in the trade, credit for them will by no means be due entirely to it. Instead of the monopoly which the daily leader-writers have seen in the new rubber organization there will be found to be only better regulated competition. This is what the best sense of the business community demands in every department of enterprise. If the United States Rubber Co. should succeed to the extent hoped for by its promoters the result will not be limited to satisfactory dividends;—an example will have been furnished in industrial organization which any trade may follow with advantage.

Our Rank as Rubber Consumers.

IN order to show the respective standing of the countries which are the most important consumers of India-rubber and Gutta-percha, the following table is given, showing the imports of crude gums for the first nine months of 1892; also, the exports of crude material, after which is given the amount remaining, which represents stock or the consumption in manufactures:

DETAILS.	United States.	Great Britain.	German Empire.
	Pounds.	Pounds.	Pounds.
Imports, nine months....	27,407,233	26,373,424	7,506,180
Exports, nine months....	734,710	11,470,806	1,661,880
Remaining for home use...	26,672,523	14,902,618	5,844,300

It will be observed that of the amount consumed by the three countries named, largely more than half is used by the United States. If allowance be made for the fact that of the rubber goods made in Great Britain a considerable share is exported, while by far the larger part of those made in this country are sold and used at home, it may safely be calculated, even in view of our large population, that the use of rubber goods *per capita* is much greater in the United States than in any other part of the world. It may be added, by the way, that a similar fact exists with regard to almost every other commodity entering into general use in America, from iron to sugar—from paper to beefsteaks. Truly the buying classes in this country afford a wonderful market.

THE asbestos mines of Canada are producing more than 10,000 tons a year, most of which is found in the vicinity of Quebec. First-class asbestos from this region brings from \$275 to \$300 a ton.

THE "INDIA RUBBER WORLD" IN AUSTRALIA.

THE INDIA RUBBER WORLD has begun the issue of an Australian edition for circulation among Australian dealers in rubber goods, and manufacturers whose industries require the use of rubber. Its distribution among these classes will be thorough and all inclusive. The advertising pages cannot fail to divert into American channels a very large part of the extensive Australian trade in rubber specialties and machinery,—a

trade which until lately has been almost monopolized by England, in spite of America's great superiority in the production of this class of goods. An illustration of the effect which may be expected from the Australian issue is to be seen in the appended letter lately received by G. G. Turri & Co., of the Sun Buildings, Melbourne, in whose hands the distribution of this journal in the colonies has been placed:

Memorandum.

FROM

H. ZUMSTEIN,
IMPORTER, INDENT AGENT, &C.,
486 COLLINS STREET,
Melbourne.

To

Detot 26 1892
Messrs G. G. Turri & Co.
Let

Dear Sirs,

I am very much gratified at receiving the "India Rubber World" through you. I am sure its distribution will greatly help business, notably in American Rubber Goods, where such authoritative information can be placed before customers, besides what the importer or seller can say.

It is all the more important in this market, where consumers, though many years old, have become so wedded to the North British make, that it is sure to be asked for, insisted upon to the exclusion of other brands, equally good & perhaps preferable. Hence the Ironmongers generally stock no other make in these markets, in many lines. Particularly is this the case with R. ROSE.

Yours, much obliged,
E. Jantzen

Mr. Apsley's Election to Congress.

MR. L. DEWART APSLEY, president of the Apsley Rubber Co. (Hudson, Mass.) will represent the new Fourth Massachusetts district in the Fifty-third Congress, having been elected on November 8 over Frederic S. Coolidge by a plurality of 3127. A correspondent of THE INDIA RUBBER WORLD writes: "His canvass was a clean and straight one upon the issues of the tariff and honest money as the main points, and the principal attack against him was in regard to the benefits of the tariff to the

workingmen, and particularly to those connected with his business. He spoke in almost every town in his district, and in every case from the standpoint of a manufacturer, and emphasizing the benefits to the working people of the Republican system of protection." Mr. Apsley is a prominent citizen of his town, and a director in some of its most important enterprises. His portrait and some account of his life will be found in the issue of this journal for April 15, together with a reference to the successful work done by him two years ago in securing a revision of the tariff in the interest of rubber-manufacturers.

THE LOCATION OF A RUBBER FACTORY.

By I. A. Sherman.

THERE are several factors in the economical location of a rubber-mill which, in these days of close competition, are beginning to be noted by the managers of rubber companies. Naturally the price of real estate is a considerable item, as it goes to make up the capital account, and interest accumulates in dull times as well as in good,—nights, Sundays, and holidays,—and is a charge on every pound of product. The transportation of coal is a factor about which considerable judgment has to be used. It is really the largest item in transportation bills, and is estimated to be equal to five times the amount of rubber, or that of duck in mechanical concerns. The suggestion has been made that a mill near water-power would be advantageous, but this advantage is more apparent than real.

What the rubber-mill uses is steam and plenty of it, but four-fifths of it goes from the boiler to other parts than the engine. So transportation of coal has to be considered before cheap power, even if the latter be of the first order. Then contiguity to a base of other supplies must be considered. There are the recovered-rubber and duck-mills, the chemical depots, crude rubber, etc. The first-named are now near the rubber-mills, and special pains has been taken to locate them advantageously with respect to means of deep water communication. The owners of these mills say that a difference of a few cents per hundred pounds adds considerably to the total of cost of goods. It costs little per pound, and cheap schooner-transportation is all that is necessary, and that mill is advantageously situated which is at deep water to receive this and other material. Then there is duck. Some of our larger mills are in Baltimore, and as the amount transported is large, another item is in favor of water-transportation; only it must be remembered that, when goods are costly, slow transportation eats up capital to some extent, and is a matter for calculation.

The chief rubber market is in New York, but it must be confessed that the transfer across the city en route to other points is expensive. Doubtless the officers of the new mammoth companies who will handle their supplies on a large scale, will continue a system which can be employed to lessen the freight charges on this commodity. Rubber is costly as to bulk, and slow transportation is not cheap, unless we take into consideration the fact that the time may be utilized in drying it out,—a matter, however, subject more or less to the conditions of each shipment. Sailing vessels have been used to bring rubber from Pará; indeed one is now about due; but such shipments are only occasional. Some eastern factories have chartered sailing-vessels, but doubtless there was not much economy in dumping a whole cargo, costing a fortune, at the factory, some of it to be used months afterward, it being supposed that it would all dry out at the same time, thus accumulating interest, simply to save the difference between the cost of steam and water transportation and the transfer at New

York. In the matter of the transportation of rubber it is of advantage, however, to have the mill located at tide-water.

Then comes the climatic question. The maker of linen goods says that the old countries have the best atmosphere for his product; the Fall River man says his cotton-mills between two large sheets of water are in touch with Nature; but these assertions are the subject of debate. It is very certain, however, that the rubber-mill located in too warm a climate is seriously handicapped. Mills around New York are idle more days than in New England, but the comparison would be more to the point if we had a factory south of Philadelphia with an experience from which to gather figures.

There is also the labor problem. Labor is gregarious; it flocks by itself; it does not like to go far from the center of its particular industry. Many a concern in other industries which has been tempted to go South on account of what may be called "natural advantages," has found this to be a leading question. New England is apparently the best locality for skilled labor; it is cheaper there and more readily obtained when needed. There are more women there who are disposed to earn a livelihood in factories, and the employment of young girls is quite a consideration in many of the details of rubber manufacture.

The volume of trade, however, comes more from the West than elsewhere, and this is a factor which will bear investigation. Advantage is made of lake transportation before the close of the navigation season in each year, but there are constant variations in this regard which upset all forecasts. To make up a year's supply of goods for the western cities during the hot summer to be in stock more or less during winter implies a cost not accurately known. The western factories have, it is claimed, a great advantage in this respect, but the West is as yet without the boot-and-shoe factory, so that all the elements for comparison do not exist.

The question of location is, as will be seen, one of many and peculiar conditions. A rubber-man who was asked for his opinion as to the ideal location said: "Baltimore is near the coal and duck supplies, and not disadvantageously located for rubber receipts. It has a good rail outlet to the West. It has, however, a long summer, and a factory there possibly would be too much handicapped. Around New York and in New England there is the advantage of the labor and tide-water, but it is perhaps too far from the West. Albany would make a good point. It is well located for coal and as well situated as New England for material, but the labor question would be one to consider. For an off-hand opinion I should say that Buffalo would be an excellent place for a rubber-factory. Canada furnishes rubber men with a good deal of labor, and Buffalo is near the Dominion. The Erie canal could take to

Buffalo its material, and, mind you, it is cheaper to transport raw articles than manufactured goods. It is very near the coal regions, and it is in touch with the whole West. It is cold there, also; one shivers in summer, which renders the location as good as Canada for vulcanization. It is a large place, well located for railroad, lake, and canal transportation, and with respect to the two latter, where bulk is broken in any event, is nearer more large cities than any available place; it has an excellent belt line of

road; in fact, I should say that there will be a mill there some day which, if well managed, will be a revelation."

Another consideration has been suggested by the completion of the great tunnel at Niagara for the utilization of water-power for the transmission of electricity for manufacturing. Already some of the promoters of the proposed new rubber concerns have been discussing the propriety of locating a great factory in the vicinity of the lakes, that advantage may be taken of the Niagara enterprise.

HOW STOCK COMPANIES ARE COMBINED.

By Robert M. Dean.

IN the combination of several corporations into one huge organization, as has been done lately in two cases in the India rubber trade, the most difficult step is making the start. The leading spirit must be a man among men. He must know the industry involved from top to bottom; he must personally stand high among both financiers and the men who control the leading manufacturing, and must be a man of untiring energy and diplomacy, and of high education. His plans are at first little more than an outline, to be filled in, or deviated from, as he goes along. Getting two or three men together as a nucleus for the organization,—a relative or two, or a fellow-director in one or more institutions,—it is an easy matter for him to draft an agreement which the others will sign as a preliminary measure. This agreement is carefully drafted, however, with a view to making its provisions so liberal that many other persons will be likely to take hold of the idea also. When all begin to come in, there is generally a fear upon the part of those who wish to remain out that they will be placed at serious disadvantages in the way of competition or otherwise, and some of them are impelled to join. Then financial men of high standing are induced to enter the organization, and banking houses come in, hoping ultimately for commissions in the sale of stock, or to gain a knowledge of the industrial enterprise for use in future relations with the public. The affairs of the embryo company are now ready to take a more tangible shape, and a charter is the next step. This of course is readily obtained, generally in some State where the tax burdens imposed upon corporations are least onerous.

Then a board of directors is elected, generally composed of the financial men hitherto mentioned and a few others to act as "dummies." These dummies—and the term applies to the position rather than the character of the men—are persons of high standing and intelligence, who assume their places simply that the legal restrictions may be avoided which prevent the transfer of stock from one corporation to another where the parties to the transfer may be directors in both.

Then the purchase is undertaken of the companies which are to be combined. The preliminary agreement has partly arranged for this. The general idea is that the property of each, as assessed at a certain time, shall be exchanged for preferred and common stock in the new

company on a certain basis. The stock to be issued amounts generally to more than the value of the combined properties, the proceeds of the surplus being used for the expenses of organization and to create a fund which will allow the new company to proceed freely with its operations. It will be a large borrower of money at times, but it wants to be strong always, and thus seeks to begin with plenty of capital.

These stock transactions arranged,—and they are sometimes perplexing,—there comes the serious and tedious task of appraising the different properties. The parties selling a plant naturally will endeavor to get all they can for it; on the other hand, the owners of the other plants are jealous of any price that might be paid, and so everything has to be conducted with absolute integrity. The appraisers appointed meet at a certain factory and begin to itemize the property, making every step a matter of record. The real estate perhaps comes first. The members of the board may know little of local values, and so one or two real-estate men are called in to name a price. Then for the stock on hand an expert from a disinterested source is called in; for machinery a mechanical expert is engaged, and so on. The rule is to engage the best man for each class of property, and while he is paid well for his services, it is understood that he will submit a value that will be above honest criticism. This work goes on week after week, the accountants busily detailing everything in a permanent way on the records, and then summarizing it for submission to the board of directors.

The board votes to purchase the property, and the new concerns are brought in. Then the temporary members resign, one after another, representatives from the companies which have been absorbed taking their places. A new set of officers is elected, and a constellation of "stars" comes into the management of the huge company. Everything is well organized, and the company has on its best "frill and tucker." The time is ripe to sell the stock. Some large capitalists are now in "on the ground floor," and they have hosts of friends who are anxious to make a little money. A banking-house of high standing has been engaged, and the newspapers have unconsciously advertised the whole affair day after day. Some of them have criticised it severely, perhaps, but that has only added to the interest of the public in the company. Every metropolitan newspaper has now a large advertisement explaining

the value of the industry and the property, and explaining that if the public wants a little of that stock they can have the privilege,—for a day or two. There is a touch of human nature in this limitation, for generally investors are slow to act, and something is necessary, in the style of an advertisement, to arouse them from their apathy. This last stroke may be a brilliant one in its success, or it may end in gloom.

If a good proportion of the stock is not taken, there comes a tedious sale of it by retail. A study of the times

is of first importance, for there are years when an investor will exchange gold dollars for cabbages, and again he would hardly draw his check for a bargain in diamonds, so suspicious he becomes. After the subscription to stock comes perhaps the listing of the shares on the Stock Exchange, after which the Keenes and the Cammacks move prices up and down, one operator saying all manner of evil against it, and his opponent often helping him, so as to make a "scoop," squeeze the "shorts," and relieve the perplexed "lamb" periodically of his coat of wool.

THE MANUFACTURE OF RUBBER TOY-BALLOONS.*

THE attention of all engaged in the rubber trade has often been attracted by those colored rubber bubbles, or balloons, that are peddled wherever the public gathers, to which more recently have been added the whistling and "papa" and "mamma" crying rubber bag-pipe toys.

The manufacture of these rubber toys has been and probably will be monopolized for some time to come by French, English, and Belgian firms. The cause for their monopoly, in this in the aggregate important branch, must be found in the absence elsewhere of the precise class of labor that will do this difficult work, requiring great skill, at very low figures. In France as well as in England and Belgium this specific work is mostly done by girls and children, who by their great skill manage to do it at a very low cost to the manufacturer. But whoever has once seen these women and boys, the latter not above twelve years of age, at their work, in localities filled with the vapors of sulphuric chlorid and carbon sulphid, with their sickly faces, will not easily meet with the product of their labor without being reminded of the scene of social misery as it is presented in its production. If this applies in a less degree to those big factories where great care is taken in ventilating the large shop in which this kind of work is going on, it certainly applies to what is customary in the city of Paris, where the laborers, all the members of a family, do this work at home, where fuel must be saved and ventilation is objectionable in consequence. A considerable trade has grown up in these articles, but the question whether a successful competition in their manufacture can be set up elsewhere is one that experiment alone can decide.

The manufacture of these rubber toys is divided into four successive manipulations:

- I. Making of the balloons.
- II. Their vulcanization and inflation.
- III. The coloring.
- IV. The ornamentation, by drawings and inscriptions.

It is in the second manipulation, that the main difficulty lies, or more specifically stated, the danger of great waste.

I. The material used in making balloons consists exclusively of the highest grade of English patent rubber plates of the thickness as 12 to 14. The presence of even the finest particle of sand in the plate renders it useless for

balloons, because, when they are subsequently inflated, the particle of sand jumps out and leaves a perforation that makes the balloon leaky and useless. Such particles of sand are not of unfrequent occurrence even though the naked eye may not discover them in the plate.

By their size the balloons are classed as made of two or four parts. The single parts are cut in sets of five to six by a cutting-die and the use of a hammer. It is of great importance that the edges remain absolutely clean, because the presence of dust or grease would prevent them from properly joining in the making up of the balloons. The five or six pieces are then carefully drawn apart and delivered to the joiners. It is in the joint-making exclusively that any machinery is put to use. The joining machine, which has the appearance of a sewing machine, and is likewise moved by foot-power, consists mainly of a small anvil and a trip-hammer, to the action of which the joints are exposed and by which they are effectively formed. Although apparently simple in manipulation, the skilled laborer exclusively knows how to do it effectively, rapidly, and without spoiling the cuts.

Pasting the joints does not answer the purpose on account of costing more and being less reliable. The hammered joint will stand more strain than the pasted one. The joiner has his stock of parts on a clean and moderately heated plate, the heat assisting in making a good joint rapidly.

II. The vulcanization is effected by the use of either benzine or bisulphid of carbon. For the vulcanization of the two sizes different mixtures are employed, and each size is treated with different liquids on the outside and inside. In treating the smaller size the following compositions are used:

1. For the outside: 1000 parts benzine or bisulphid of carbon and 10 parts chlorid of sulphur ($S_2 Cl_2$).

2. For the inside: 1000 parts benzine or bisulphid of carbon, and 16 parts chlorid of sulphur.

The vulcanization is performed by first dipping the open ends of the balloons into the first liquid, by then inserting a glass rod into the balloon and dipping the balloon into the first liquid but far enough only to reach the line of previous dip, thus preventing both the liquid from entering the inside, and the edge of the opening remaining unvulcanized. An interval of at least three hours must

*Translated for THE INDIA RUBBER WORLD from *Gummi-Zeitung* (Dresden), October 15, 1892.

remain between vulcanizing the inside and outside. The vulcanization of the inside is then effected by pouring a small quantity of the second liquid through a small glass funnel into the balloon and by wetting its inner surface by shaking it well, after which the remainder of the liquid is allowed to run out.

The inflation follows immediately and in rapid succession after vulcanizing the inside. Bellows are used for the purpose that have a sensitive check-valve, and into which some French talc can be inserted, that is blown with the air into the interior of the balloon to prevent the sticking together of its walls. The inflating action ceases, when the balloon has become transparent and has assumed a regular spherical or other intended form. The balloons are then laid out on a warm plate, covered with talc, when they take their natural form.

The method of inflation just described is the same for balloons of all sizes. It yet remains to specify the liquids, as they are employed in the vulcanization of the larger sizes, which always immediately precedes the inflation. The numbers by which the sizes are marked indicate the circumference of the inflated balloon in centimeters.* For all of the larger sizes an extra manipulation intervenes between the hammering and the vulcanization, which manipulation is indispensable for all balloons made of four parts, and it consists in dipping the hammered balloon into a liquid mixed as shown below.

For the preliminary dipping of larger sizes: 3 liters of bisulphid of carbon and 20 grams of chlorid of sulphur ($S_2 Cl_2$). The object of this special manipulation is to make the joints hold together in the subsequent vulcanizing and inflating. The other liquids employed for vulcanizing are composed as follows:

For balloons made in 2 parts on inside:

	Liters Bisulphid of Carbon.	Grains Chlorid of Sulphur.
No. 45	3	100
No. 50	3	100

No. 55	3	105
No. 60	3	105

For balloons made in 4 parts on inside:

No. 45	3	100
No. 50	3	100
No. 60	3	105
No. 70	3	105
No. 80	3	105
No. 90	3	105
No. 100	3	105

For balloons made in 2 or in 4 parts on outside:

No. 45	3	70
No. 50	3	80
No. 55	3	80
No. 60	3	90
No. 65	3	90
No. 70	3	100
No. 75	3	100
No. 80	3	100
No. 85	3	100
No. 90	3	100
No. 100	3	100

After being vulcanized the balloons are left to dry, for which purpose they are exposed to clean dry air for twenty-four hours, after which they are ready for being colored.

III. Aniline colors with methylic alcohol as base are exclusively used for coloring rubber toy-balloons, the red, green, blue, orange, and pink shades being used. The aniline colors are boiled in clean rain-water, and when cooled off the balloons are dropped into the coloring liquid and turned so as to have their entire face wetted, after which they are dropped on cold water and turned to be washed of superfluous color liquid. A properly colored toy-balloon does not give off any of its color even when washed with water.

Flying snakes, dolls, Yankee babies, preservatives, etc., are made in the same general method with the use of different patterns and cuts. The bag pipe balloons have the sounds regulated by providing the inner opening of the pipe with a diaphragm of single fine rubber cords.

IV. Drawings and inscriptions are made by rubber stamps, which are, when wetted with aniline colors that contain no fatty substance, gently touched on the balloons

SHORT TALKS WITH THE RUBBER TRADE.

PRESIDENT SPADONE, of the Gutta-Percha and Rubber Manufacturing Co. (New York) said to a representative of THE INDIA RUBBER WORLD: "If the new Administration at Washington will take off the duties on raw materials it will be of advantage to all. I know of thirteen factories around Philadelphia that are ready to start up if they could be relieved of the handicaps now existing, or the irregularities in the tariff laws. They are not rubber-factories, but concerns to which we could sell equipment if they were in a position to operate their mills. I believe that we will have a very much more prosperous condition of affairs in this country when these matters are arranged, and as for a change in Administration hurting us, it will not, according to my opinion, do that, but will be of advantage. Naturally rubber-factories are not affected, as rubber is free, but a greater ability of their customers to buy goods will do them good."

* Centimeter = .3937 + inch; one inch = 2.54 centimeters.

H. A. CHURCHILL, of J. Galt Smith (New York), who furnish a large amount of cloth to the rubber-clothing men, speaking of the effect of any change in the tariff said:

"Temporarily and for two years to come an agitation would help those in the business. The theory for this is that such an agitation would check the formation of new companies, and the building of more plants. The demand, however, will not be less; in fact it would have a percentage of growth if our people continue to be employed and have plenty of money to spend. The supply at present is hardly up with the demand, and the latter will outstrip the former pretty soon. So those in the business now will have the advantage of their position, and will soon be able to charge higher prices. I have an impression, however, that the tariff will not be materially changed. There are a good many protectionist Democrats, and they will use a large influence to prevent a wholesale meddling with our present laws and general prosperity. The Englishman

however, seems to think that our tariff laws will be repealed. He is speculating already in Australian wool and has forced it up ten cents per pound. That is an advance of 25 per cent., and his theory seems to be that he can borrow money at 2 or 2½ per cent., and carry the wool a year or so; making a handsome profit. The scheme is a pretty one, and will pay handsomely if it works out. But there are other matters of import coming up, difficulties in the way of currency and financial matters which are beyond the best minds so far, and the tariff matter I believe will be temporized for the present."

* * *

THEODORE E. STUDLEY, of the Goodyear Rubber Co. (New York)—"According to my opinion a change in the tariff laws will not harm us in the least. Naturally something will depend upon the adjustment of the schedule, which is a difficult task to perform, but if it be done fairly well we will not suffer. Of course some manufacturers may not agree with me, and may say that I speak from the stand-point of a selling-agency, but I think the results when we reach them will justify my predictions. Take hard-rubber combs, for instance. The foreigner now sends in some very fine work, and that is all he can do. The duty is 35 per cent., but you could put it back at the old rate, and it would make no difference. In fact a duty as low as 25 per cent. would not bother us. Then in clothing, all that the foreigner can do now, is to send us very cheap goods. He has a way of making them up that gives him the advantage. If we had free wool we would be better equipped in the way of competition, and would hurt more."

* * *

S. Y. L'HOMMEDIEU, of the Columbia Rubber Works Co. (New York)—"The tariff on rubber combs is now 35 per cent. and is fairly adjusted. There are three manufactories in this country; a short time ago there were four, but the latter has, I believe, retired from the trade. Abroad there are several, mostly on the continent, there being none in

England. The largest over there is the Harburg of Homburg, and they as well as the others, make a handsome comb, finely polished and turned. The quality of their combs is no better than those made in our country, but in order to compete with them we use machinery, while they can use hand labor. The latter is very cheap with them, so they can finish up a comb better than we. The chief article of raw material in the comb is the rubber, which comes in free, so there is no margin for cheapening the article in that direction. So it is plain that any disturbance in the tariff would be of disadvantage to us, as they now can sell combs against us, only they cannot make enough money to pursue the business on a large scale. It would be different if they even got a slight difference in their favor. The business as it now stands is that we have a home competition which prevents a profit that would be unjust, and the tariff protects the industry which could hardly be prosperous were the duty lower. They also make over there hard-rubber sheet, which is used for electrical purposes. It is also finished nicely, having a smooth surface, and shows the superiority of hand labor in some details. What I have said about combs applies to this article. We can keep the home trade through the protection now given us. In combs there is probably \$1,000,000 of dollars worth sold in a year; so that would be quite an item to be spent abroad. There is a great deal of money spent for hard sheet, and it would be difficult to give figures on that owing to the rapid growth and fluctuations in the electrical business. In syringes, atomizers, and other druggists' specialties, competition is sufficient to keep the foreigner away. As to the export business there is nothing done in combs, or hard-rubber goods, the Germans holding it. With time and a continuation of our experience, home competition will gradually reduce prices to nearly what they are abroad, and if the tariff be not disturbed while the problem is being worked out, we shall have the satisfaction of creating and building up a great industry."

RECENT DEATHS OF RUBBER-MEN.

ISAAC F. WILLIAMS, superintendent of the National India Rubber Co. (Bristol, R. I.), died on November 15. He was born May 31, 1833, in New York city, where he lived with his parents and attended the public schools until he was fourteen years of age, when his family moved to Ohio. They lived there two years and returned to New York, when young William sought and obtained employment in the rubber-works in Harlem, this being his first experience in the rubber business. He worked in the Harlem mill several years and then went to the factory at Naugatuck, Conn., where he advanced rapidly in the industry. In 1865 the old Providence Rubber Co. removed to Bristol and the new plant of the National India Rubber Co. was started, and Mr. Williams was engaged as the first superintendent of the new mill. From that time, as a bright, active young man, until his death,—nearly thirty years,—he remained with that concern and gave his atten-

tion and study to the advancement of the rubber industry. He was considered one of the most practical men engaged in the business. He made many valuable improvements and obtained several patents for useful inventions, among which are the famous Snow-Excluder Arctic and "Monitor" gaiters, waterproofing textile fabrics in various ways, construction of boots, and several mechanical improvements, all of which have been in practical use and contributed largely to the success of the companies using them.

Colonel Williams will be greatly missed, not only in the rubber business, but in public affairs in Rhode Island, which he took a very active part in. He was a member of the town council of Bristol for seven years and served in the State Legislature. He was chairman of the Republican State Central Committee and held high positions in the Masonic order, the Odd Fellows and other organizations. His place at the National factory is being filled by Mr. P.

H. Coyle, a younger man and next in rank, who has been in the rubber business fifteen or twenty years, and has gone through the different branches. Mr. Coyle is thoroughly educated and for the last five years has been very closely connected with the business of the company.

JOHN W. CONNER, manager of the Chicago branch of the Lycoming Rubber Co., died at his home in Chicago on November 12, after an illness of several weeks. Mr. Conner was connected with the Lycoming company from its organization, being one of its stock-holders. Going to Boston he associated himself with George W. Sanford under the firm name of Sanford & Conner, as selling-agents for the company. Seven years ago he took up his residence in Chicago, since which time he has had personal supervision of the Western agency of the company, at No. 177 Monroe street. Mr. Conner was born at Crisfield, Md., fifty-three years ago. Prior to the war he taught school, but at the firing on Fort Sumter he united his fortunes with the Union army, where he made a magnificent record for bravery and gallantry. For several years after the war he was deputy collector of customs at Crisfield. At the time of his death Mr. Conner was a deacon in the Park-avenue Methodist church and the superintendent of its Sunday-school. The family which survives him is composed of his widow, four sons, and three daughters. The funeral services were held on Wednesday, the 14th, and the interment was at Forest Home cemetery. The business-house of the firm was closed out of respect to the deceased. Mr. Conner was in appearance and manner a young man, and had a great number of friends in business and in private life.

DAVID M. BLISS, general superintendent and manager for several years past of the Pacific Rubber Works, of Elizabeth, N. J., was found dead in bed on the morning of November 14, at the home of his sister, Mrs. Russell G. Green, of No. 156 Orchard street, with whom he lived. Her husband is one of the proprietors of the rubber works, the firm being Gates & Green. Recently Mr. Green has been an invalid, causing almost the entire responsibility of the management of the plant to fall upon Mr. Bliss. The works have been overrun with orders since their rebuilding two years ago, after being destroyed by fire, and the strain

has proved a heavy one for Mr. Bliss, who was about sixty years of age. Recently he has been complaining of trouble in his head, although in appearance he was in good health. Tightly grasped in one hand was a pistol, with which he had taken his own life. Mr. Bliss was a native of Cheshire, Mass. He was a bachelor and, notwithstanding his nine years residence in Elizabeth, always claimed New York city as his home. He was a member of the wholesale shoe firm of Porter & Bliss while it was in business at Thirty-first street and Broadway.

GEORGE H. APPLETON, who died November 8, at the Narragansett Hotel, Providence, R. I., was well known in the rubber trade. He was for many years sales-agent for a large rubber company in the druggists'-sundries line, and afterward marketed several specialties of his own. He was also interested in real estate in the city of Haverhill, Mass., and was accounted to be very successful in this, as well as in the rubber business. He was suffering from rheumatism all his life, and was accustomed to apply laudanum to deaden the excruciating pain that he suffered. It was from an overdose of this drug that he died. He was born at Haverhill in 1844. He was a deacon in the North Congregational church in that city, was very active in Sunday-school work, and was highly esteemed by all who knew him.

CHARLES JOSEPH FALES, one of our most respected citizens is dead. Mr. Fales held a position of trust at the National India Rubber Works for more than twenty years. Previous to that he had held many important positions of trust. He was a scholar and a linguist and a worthy member of St. Alban's Lodge. His funeral will take place on Tuesday next from his late residence on Byfield street.—*Providence (R. I.) News Bristol items, November 19.*

JOHN SANDERSON, a prominent resident of College Point, died at his home in that village yesterday after a short illness. The deceased had been engineer in the Enterprise Rubber Works in College Point for over thirty years, and he was a prominent member of Anchor Lodge, F. and A. M. He was sixty-seven years of age. His funeral will take place from the Reformed church to-morrow afternoon.—*Brooklyn Times, November 30.*

A Decision Relating to Trade-Marks.

THE Government has recently made a decision of considerable interest to rubber-men. It appears that the Wanaulauset Manufacturing Co., a New England corporation, had obtained a trade-mark for three red lines placed longitudinally on linen hose. Some of the Boston companies have been importing hose with three orange lines, similarly placed, and a contention arose as to whether this did not infringe upon the rights of those owning the trade mark. It was claimed that many people were deficient in the matter of sight,—i. e., color-blind,—and others were careless, and that the orange could be readily sold to parties who intended purchasing the "Red Line."

Under a protest a consignment of the imported hose was detained in Boston while the case was made up, forwarded, and a decision had. The decision substantially is that red lines form the trade-mark, and are the essential part of it, and cannot embrace other colors. The decision comes from the Commissioner of Patents through the Secretaries of the Interior and Treasury to the Collector of the Port of New York, and is of interest to all buying hose as well as the parties in contest.

A PLANT is in process of erection in Renfrew, Pa., to manufacture lampblack from crude oil. According to experiments a barrel of crude petroleum produces about thirty-seven pounds of lampblack.

THE TRADING IN RUBBER STOCKS.

By Howard Irving Smith.

TRADING in the common stock of the United States Rubber Co. began in the New York stock market on November 18. At the time the public was invited to subscribe to the preferred stock at 102½ private sales of the common stock were reported at 30. A few days later it sold at 35. The opening sales on the Stock Exchange were at 39, since which time the price has fluctuated within a range of 7 or 8 points. The price is based upon a prospective value, of course, and buyers to-day will have to wait a year to learn just what is the value of their stock from a dividend standpoint.

"Rubber" is an "unlisted" stock,—that is, the stock is not on the regular list of the Stock Exchange. It is a distinction without much of a difference. A "listed" stock is that of a corporation, which has submitted a statement of its financial condition to the Stock List Committee of the Exchange, upon whose recommendation the Governing Committee has admitted the stock to the list. The issue cannot be increased—if the stock is to continue on the list—without securing the approval of the authorities of the Exchange. The purpose of this procedure is the protection of the public against over-issues and misrepresentation.

An unlisted stock is one for which the Exchange assumes no responsibility. Dealings in it are permitted on the Exchange for the convenience of the public. There is no restriction as to the extent of the issue and no requirement beyond proof that the corporation is solvent and is a legitimate enterprise.

Because a stock is in the unlisted department is no sign that it is not as good a stock as any on the list. "Sugar," or in other words the stock of the American Sugar Refining Co., is not on the list, yet the dealings in it often exceed those of any stock on the list and it commands a very high price. The stocks of the National Lead Co. and the American Tobacco Co. are also in the unlisted department. As the United States Rubber Co. acquires new property it will want to increase its stock, and it will therefore be saved trouble by not being "on the list." It can make application to have its stock put on the list when the enterprise is fully developed.

The trading in rubber was started November 18, by H. B. Hollins & Co., who had a great deal to do with "floating" the company. It was necessary to put matched orders in the stock to "get it going." One broker was given an order to "bid" for the stock at a certain price and another to sell at that price. This transaction is known as a "wash" and is often resorted to to keep up the price of a stock and as often to hold down the price. The buyer is the seller and by making in this way high or low prices he may be able to protect "long" interests (stocks bought to sell at higher prices) or "short" interests (stocks sold when not possessed with the expectation of buying at lower prices to fulfil contracts for delivery).

It is not easy to get a new stock in circulation. Speculators are reluctant to touch it until they can gage its true value and be convinced that they can "find a market" for it, or, in other words, be able to effect a ready sale for any they may have on hand at somewhere near the ruling price.

The "insiders" in "rubber" have indicated by the way they have made quotations that they wish 40 to be considered the bottom price for the stock. They have made the fluctuations heavy to convey the idea that the person who buys at 41 or 42 is likely to have a chance to make 2 or 3 points. Only a year or two ago "Sugar" was selling around 50, and it has been

above par or 100 for months. Chicago Gas sold down to 37 a year ago, and last month it almost touched par. It is not always the high-priced stocks that are the most active. Reading is a low-priced stock, but the business in it has been the heaviest during the present year of any stock dealt in on the Exchange. Rubber may become both active and high-priced, as it represents a great and growing business.

* * *

THE daily quotations in "Rubber" on the Stock Exchange have been as follows; the statement shows also the number of shares dealt in:

DATE.	Sales.	Opening.	Highest.	Lowest.	Closing.
Nov. 18.....	4,981	39	43½	38¾	43¼
Nov. 19.....	8,155	44½	48¾	44¼	48½
Nov. 21.....	7,785	48	48½	44¼	44½
Nov. 22.....	2,975	45	45	43¼	44½
Nov. 23.....	2,412	44½	44½	41¼	42
Nov. 25.....	2,690	40½	42¼	40	40¼
Nov. 26.....	289	40¾	40¾	40	40
Nov. 28.....	894	40¼	40¾	40	40
Nov. 29.....	127	41	41	41	41
Nov. 30.....	900	39¾	40	39½	39½
Dec. 1.....	710	39	39¾	39	39
Dec. 2.....	525	39¾	39½	39¾	39½
Dec. 3.....	535	39½	40	39½	40
Dec. 5.....	2,519	40	43½	40	43½

* * *

THE advertisement of 100 shares of United States Rubber Co.'s preferred stock to be sold at auction at the Real Estate Exchange in New York, on November 30, was read in the trade with no little interest. Several gentlemen interested in the new company were present and bids came free and fast—80, 90, 95, par, and 100¼, at which the sale was made. This is less than the stock was offered to the general public, the market being fixed at 102½, at which price the stock sold rapidly.

The Rubber Trade of France.

THE extent of the consumption of crude rubber by French manufacturers may be estimated from the comparative statement of the imports and exports of that commodity as shown in the following table for three years, the figures given expressing pounds:

	1890.	1891.	1892.
Imports, January-September....	4,946,088	6,971,272	5,971,801
Exports, January-September....	2,015,501	2,651,440	3,266,120
Consumption and Stock	2,930,587	4,319,832	2,705,681

The imports of manufactured rubber goods in the same time have remained almost stationary in amount, while there has been a falling off in exports, with the exception of elastic tissues.

Syringe Goods Wanted in Australia.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We should esteem it a favor if you would give our name and address to the makers of syringe-fittings, such as pipes, taps, tubing, etc., and get them to send us samples and prices. It would be mostly fountain fittings that we should require. They might also include the rubber bags and tubing and vaginal pipes, irrigators, etc. Thanking you in anticipation. Yours very truly,

PERDRIAU & CO.

No. 270 George street, Sydney, New South Wales, October 29, 1892.

TRADE AND PERSONAL NOTES.

THE annual meeting of the stockholders of the Boston Belting Co. was held on December 5, in the Meionaon, Tremont Temple, Boston. The following named gentlemen were re-elected officers of the company: Directors—William S. Eaton, James Bennett Forsyth, I. P. T. Edmonds, George A. Miner, James Pierce, J. H. D. Smith, and George Whitney; Treasurer—J. H. D. Smith; Clerk—Edward Upham; Auditors—George O. Currier and Thomas Lang. It was voted to increase the capital stock of the company from \$700,000 to \$1,000,000. After the meeting of the stockholders, the board of directors met at the office of the company, No. 256 Devonshire street, and organized. William S. Eaton was re-elected president. James Bennett Forsyth is manufacturing agent and general manager of the company.

—The Standard Rubber Corporation (Brockton, Mass.) report that so far each month has shown a larger volume of business for them than the preceding, November making the largest showing in the history of the firm. They now have an unusually large force of hands at work, and running a large portion of their plant a great deal of over-time. It is stated that they have been declining orders since November 1.

—The Massachusetts Electrical Engineering Co. (Boston), are placing upon the market a new insulating compound called "Insullac" to take the place of shellac, which is now commonly used. It is applied to the wire in the same manner as shellac, by a brush, and its relative insulating quality is as ten to one when compared with that substance. It contains no acids or anything injurious to workmen engaged in applying it.

—All the stair-treads on the Elevated roads in New York city are made by the New York Belting and Packing Co. In all probability, were they not made of rubber, there would be many serious accidents from the falling of people by slipping, and the extent of the multitudes that walk over them is good proof of the wearing quality of the treads.

—The Wales-Goodyear Co. (Boston) have fitted up a fine little correspondence office within their new office in the Shoe and Leather Exchange building, which will be occupied by Miss S. Piper, who is as probably well known to rubber-shoe buyers as any lady in the country.

—The Norfolk Rubber Co. (Boston) are very busy and are receiving many compliments on the fine finish and excellent quality of their goods.

—The Cleveland Rubber Co. have recently opened a store at No. 248 Race street, Cincinnati, where a full line of mechanical goods, clothing, druggists' sundries, etc., will be carried. W. G. Brown, who has been their selling-agent at this point for several years, becomes manager.

—The copartnership of Prescott Brothers (Boston) has been dissolved by mutual consent, Charles S. Prescott resigning. The business of selling wringers, sweepers, and rubber goods will be continued under the same firm-name, at the old stand, Nos. 54-56 Cornhill street, by John W. Prescott and William Keyes.

—The people of South Framingham, Mass., are still hopeful that the plant of the old Pará Rubber Shoe Co., which has passed under the control of the United States Rubber Co., will yet be operated, and that without any great delay. The factory is well adapted for a rubber-shoe factory, and if run entirely for the manufacture of rubber shoes it will be one of the largest in the country, having a capacity of 20,000 or 30,000 pairs per day. The machinery is in excellent condition.

—The old and familiar names of *Basil*, *Gregory*, and *Justin* now appear in the foreign marine intelligence. It is the custom of the English owners of steamships to place them in the American trade for a certain time and then withdraw them so that the captains and crews can be at home at the end of each trip. At the end of three years they return to the American service.

—In the Church-street window of the Gutta-percha and Rubber Manufacturing Co. (New York) is a collection of the implements of the rubber-gatherer of the Amazon, which is probably as complete as any ever seen in New York. The gourd and a glass covering nuts, the stick or paddle with a biscuit of "fine Pará" worked upon it, the little cups which are fastened to the tree, the hatchet, etc., are all carefully selected, and were especially obtained for the company. In addition there are various samples of Gutta-percha, two square blocks of which have upon the top the forms of lizards, and are executed in good shape, showing that the native of the East Indies has some conception of art. This collection, with the huge biscuit of Pará which has formed for a long time a permanent feature in the Warren-street window, is intended for exhibition at the World's Fair at Chicago.

—Running nights is not always economical, but the F. J. Kaldenberg Rubber Co. (New York) have been forced to this expedient in order to keep within sight of the last order on their books. Since October 1 they have run three nights each week.

—Alfred Hale & Co., No. 30 School street, Boston, have gone into the manufacture of air-goods. Some of their carriage invalid and other cushions are as fine pieces of work as the rubber trade has yet seen. Mr. Hale has recently received patents on several new designs in this line.

—Cheever K. Dodge, manager for the F. J. Kaldenberg Rubber Co., reports a rapidly increasing demand for "Best Red" packing. This is a new sheet packing for steam-joints and is guaranteed not to blow out, burn out, nor become hard when exposed to steam heat, and is claimed to be superior to any other sheet packing on the market, red or otherwise.

—The relative rights of the Butler Hard Rubber Co., the East Jersey Water Storage Co., and the City of Newark in the use of the flow of the Pequannock river have formed the subject of recent litigation. George R. Turnbull, introduced as an expert in values, testified that when he last examined the rubber company's plant, in September, it was worth \$600,000. Without the water privileges, he would not consider it worth more than \$300,000. Chancellor McGill has granted an injunction by the terms of which the city will be allowed the use of all the water except what is necessary for the rubber company's engines.

—The Western Linoleum Co., manufacturers of oil-cloth-carriage enameled goods, etc., whose works at Akron, Ohio, were destroyed by fire last July, have sent out a sketch entitled "Still on Top," in which the artist has been happy in calling attention to the fact that the firm is still alive.

—The Washburn & Moen Manufacturing Co. (Worcester, Mass.) have put in a Greene engine to run their insulated-wire plant.

—The Newton Rubber Co. (Boston) have moved their offices from the Shoe and Leather Exchange building to Room 205, John Hancock building. Here they have larger and lighter offices, and are more in the heart of the rubber district.

—C. J. Boyd, of Messrs. Boyd, Jones & Co., Baltimore, was in Boston recently, trying to hurry up shipments of mackintoshes, and boots and shoes, both of which lines his house is sold ahead on. En route home, Mr. Boyd stopped over a few days in New York and reported trade very active.

—Latta & Mulconroy, the energetic young Philadelphia dealers in mechanical rubber goods, find an increased demand for their "Giant" stitched, and "Granite" seamless belt. They have also been very successful with the contractor's trade, filling orders for boots and heavy clothing.

—A. R. Underdown, of Philadelphia, will shortly occupy the entire building on Market street, part of which he has used for many years. Mr. Underdown has long been known as the largest jobber of oil-clothing in Pennsylvania, and with his stock of rubber clothing, boots and shoes, and leather jackets, finds his present quarters far too small.

—C. K. Dodge, of the F. J. Kaldenberg Rubber Co. (New York), reports a very large business for his company, the factory on Thirty-third street running three nights in the week to keep pace with orders. A large trade has been built up in tubing, and while improved machinery is being put in it, turn out this work with more facility, the addition of other machines is contemplated. W. H. Bennett, the superintendent of the factory, has brought out a new packing and branded it "Best Red." Severe tests of it have been made in kerosene oil and ammonia, and it has been found to be superior in comparison with the popular makes of the day.

—Eugene Herbert, of the Atlas Rubber Co. (New York), has returned from a trip of two months in the northwest. He also visited Cincinnati, St. Louis, and Kansas City. Business for the Atlas company in those sections is very good, and Mr. Herbert's trip was a successful one.

—The Singer Manufacturing Co. have lately put in for the Hodgman Rubber Co., at Mt. Vernon, six Singer I. M. machines, one Singer button-hole machine, and one single two-needle, two-shuttle machine, all for rubber work. They have supplied J. W. Johnson, of Chicago, with two Singer I. M. machines, for work on oil-cloth covers.

—The miniature molded rubber boots turned out by the Woonsocket Rubber Co. are getting to be very popular "sellers" at various fairs.

—The Bridgeport (Conn.) Elastic Web Co. are quoted as being exceedingly busy and forced to add to the size of their plant.

—C. L. Hawthaway & Sons, of Boston, manufacturers of cements and blackings, send goods to New Zealand, Spain, France, England, and all parts of Australia.

—The Woonsocket Rubber Co. have lately received large cable orders from France for rubber boots and shoes.

—The Eastern Electric Cable Co. (Boston) recently took up some of their insulated wire which had been buried over seven years, and after testing it was found to be in perfect condition.

—L. Martin & Co., the lampblack-manufacturers of Philadelphia, are filling orders sent them by European rubber-manufacturers.

—Gould, the Cambridgeport man who makes a specialty of packings, has succeeded in getting out one that is excellently adapted for packing the boxes of calender-rolls, which is a difficult feat.

—The Elastic Tip Co. (Boston), whose rubber chair-tips and buffers are so well known, have offices in London, Bombay, Hamburg, and Paris.

—The Western Rubber and Belting Co. (Chicago) are having a great run on the insulating tape and grip rubber and on belting.

—Hammill & Gillespie, of New York, who are well-known furnishers of various ingredients used in the compounding of rubber, are exceedingly busy at present, chiefly because of the various calls they have from the rubber trade.

—The Enterprise Rubber Co., of Boston, have a fine corner at No. 135 Essex street, where they carry the clothing of the India Rubber Glove Co. and the New Brunswick Rubber Co.'s shoes. The firm is composed of three young men, all well known in the rubber trade.—William E. Barker, Joseph L. Allen, and William T. Janney.

—One of the best exhibits at the Mechanics' Fair, in Boston, is shown in the Grand Hall opposite the great organ. It is Wood's storm suit, which has been highly complimented by the judges of exhibits. The exhibit also contains a fine line of mackintoshes made by the Cleveland Rubber Co., for which Mr. Wood has the New England agency.

—The Southern New England Telephone and Telegraph Co. recently laid an Okonite submarine cable from Pine Island, New London, Conn., across Long Island, to Fisher's Island. This cable was $3\frac{1}{2}$ miles long, contained six copper conductors, weighed 50,000 pounds, and was in one length, without a splice.

—The Glendale Elastic Fabric Co. are at present using 125 looms on going, and turning out 50,000 yards a week. They have also 125 new web-looms, employed upon suspender and gaiter webs, which have a capacity of 210,000 yards a week. Aside from this, they have 1500 machines in their braiding rooms, which are capable of producing 400,000 yards a week, making the capacity of the Glendale mills nearly three-quarters of a million yards of finished goods a week.

—The Mason Regulator Co. (Boston) are pushing work on their new factory, which they expect to have finished by the first of January.

—It is rumored that C. M. Clapp will close his store on Winthrop square, Boston, on the first of January and give up the rubber business entirely.

—Rufus Pendleton, a well known and popular rubber-goods salesman, has connected himself with the Goodyear rubber store at No. 24 School street, Boston.

—Henry Werner & Co., wholesale dealers in rubber goods in Detroit, Mich., have removed from their old quarters to No. 356 Gratiot avenue. They sell rubber clothing, footwear, and horse- and carriage-covers, and are district agents for the United States Rubber Co.'s goods.

—Judge Townsend, in the United States Circuit Court for the District of Connecticut, has issued a decree for an injunction and an accounting in favor of the Hammond Buckle Co. (Rockville, Conn.) in their suit against the Goodyear Rubber Co. for the so-called use of the "Star" buckle for arctics. The infringing buckle is manufactured by the Syracuse (N. Y.) Specialty Co., who assumed the defense in the suit. This is the third suit in which the Hammond Buckle Co. have been successful. The first patent to Mr. Hammond was issued in 1879. It is stated that this decision will not prevent the Syracuse company from manufacturing and selling buckles for rubber footwear and clothing, as the part of the buckle heretofore manufactured by the company and involved in the suit is very small, and the form of the buckle has been changed to conform to the terms of the decision.

—Some of the newspapers are worrying over the possibility of a shut-down at the Franklin (Mass.) rubber works, since they became a part of the plant of the United States Rubber Co. As a matter of fact the mill is crowded with orders, and the management have no idea of doing anything but run the factory up to its capacity.

—E. H. Cutler, the Boston selling agent of the Woonsocket Rubber Co., arrived in New York last week from a trip abroad, whither he had gone on business.

—The failure is reported of Mosely & Bohmer, wholesale rubber-dealers at Richmond, Va., who have been doing a large business for eight years past. Their liabilities have been variously reported at from \$47,000 to \$80,000.

—George B. Knight, of the Manville Covering Co. (Providence, R. I.), is making a specialty of pipe-covering in rubber mills, and meeting with excellent success.

—The Washburn & Moen insulated-wire plant in Worcester, under the efficient management of C. T. Schnedecher, is turning out a fine grade of rubber-covered wire.

—Lithargite, the substitute for litharge in rubber-work, does not seem to come to the front as rapidly as was prophesied.

—The Rhode Island Coupling Co., of Providence, have received a very large order for hose-couplings from the Empire Rubber Co., Trenton, N. J.

—Charles A. Hoyt, treasurer of the India Rubber Comb Co., has been for a month past in the various cities in the West.

—A hearing will be had before the Board of General Appraisers of the Customs Department in New York, on December 22, at which time all protests relative to the importation of rubber goods will be heard. At these sessions testimony is taken on any subject under consideration after which a decision is reached.

—Mr. Scribner, manager of the Loando Hard Rubber Co. (Boonton, N. J.), was a recent caller at the office of THE INDIA RUBBER WORLD. He reports that they are crowded with orders, their specialties being hard-rubber goods for electrical work.

—R. J. Ford, formerly with the Reading Manufacturing Co., has accepted a position with the Norfolk Rubber Co. (Boston), and will sell New England and New York trade.

—The Pearl corset-shield is having an excellent sale in all directions. As soon as it is introduced in any locality, second orders come along very freely.

—George Streat, who has been with the Hodgman Rubber Co. (New York) for the past five years as manager of their mackintosh department, informs us that he will cease his connection with that firm on January 1.

—Lee Straus, of Straus, Reinhard & Co. (Richmond, Va.), paid a visit to the offices of THE INDIA RUBBER WORLD on his last trip to New York. His house, established in the early part of the year, reports a live and growing trade in the considerable section of the South tributary to Richmond. Its traveling men go even as far West as Ohio. Rubber goods of all kinds are handled by the firm. A feature of the trade is the sale of tennis-shoes, which is expected to be very large next season.

—The Rhode Island Legislature, at the last session, incorporated the Marvel Rubber Co., composed of Joseph Banigan, Henry J. Doughty, and Patrick Wren, and their associates, for the purpose of manufacturing rubber boots and shoes under a new process. The new company occupy the old rubber works on South Main street, Woonsocket, R. I., but their office according to charter, is at Providence. The capital stock is \$500,000, divided into preferred and common shares, the latter to be entitled to dividends of 7 per cent.

—On November 30, Chief Swemi, for the Chicago Fire Department, placed orders for 21,000 feet of hose, as follows: *Cotton*—Eureka Co., 7000 feet; Gutta-Percha and Rubber Manufacturing Co., 2000; Empire Rubber Manufacturing Co., 1000; Cleveland Rubber Co., 2000; Callahan Co., 2000; Revere Rubber Co., 1000; Boston Belting Co., 1000. *Rubber*—Chicago Rubber Works, 2000; Columbia Rubber Works, 1000; Boston Belting Co., 1000; New York Belting and Packing Co., 1000.

—The trucks of the Woonsocket and the Wales-Goodyear people handled 1500 cases of goods in one day last week. Both interests are cared for by one party so far as trucking is concerned. Three or four hundred cases per day is a very ordinary matter in these busy times. The past month is said to have been the busiest ever known in the rubber boot-and-shoe business.

—William Yerdon, the well-known hose-band man, recently spent several days in New England and went back to Fort Plain, N. Y., with some very large railroad orders in his pocket.

—Fred L. Kolloch, of Boston, is now running the Princess Rubber Co., the plant being at Nashfield, Mass. He is making fine grades of ladies' mackintoshes, chiefly on order.

—There was a fire on the morning of December 7, in the establishment of the Morgan & Wright Rubber Co., Nos. 331-339 West Lake street, Chicago, which caused a loss, according to the local newspapers, amounting to \$35,000 on stock and building. The goods destroyed were mostly bicycle-tires. The building and stock were covered by \$36,000 insurance. The building is owned by the firm. They were able within three days to fill orders, and it is reported that they will erect a larger building.

TRADE PUBLICATIONS.

THE trade publications published recently which are of the greatest interest to the rubber trade are the catalogues of the bicycle-manufacturers. A new edition of the second annual catalogue of the "Sylph" machines manufactured by Rouse-Duryea Cycle Co. (Peoria, Ill.) has been received at this office. The peculiarity of these wheels is not only in the use of the "crescent" tire invented by Mr. C. E. Duryea, and described at length in another part of this journal, but also of springs as aiding the elastic tire to resist vibration. The catalogue quotes extensively from English publications to support its claim that springs are quite as essential as elastic tires, and even more so on rough roads. Thus *Wheeling*, an English paper, says that a combination of spring and air-tire gives the best protection to resist vibration.

—"How Columbus Tickled the Indians in Ten Ticks," by Mr. Woonsocket, of R. I., is an amusing little book, filled with pictures of imaginary scenes following the arrival in America of Columbus, with packages of "Woonsocket" rubber boots and shoes. A copy will be sent to any dealer desiring it.

—"Wales-Goodyear Drummer" is the title of a neat and convenient hand-book of styles and prices issued by the Goodyear's Metallic Rubber Shoe Co., who call attention to the fact that they have successfully made rubber boots and shoes for forty-seven years at their factories in Naugatuck, Conn. A pair of their miniature boots is offered for 15 cents, by mail, or at either of their salesrooms: Chester J. Pike, Nos. 66-68 Lincoln street, Boston; Walter Southwick, No. 72 Reade street, New York; and A. D. Wentz, Nos. 257-259 Franklin street, Chicago.

INDIVIDUAL MENTION.

COLONEL SAMUEL P. COLT, president of the National India Rubber Co. (Bristol, K. I.), gave a reception and wedding breakfast at his residence on November 16, in honor of the marriage of his niece, Miss Lisette De Wolf Colt, and Mr. Arthur Rotch, a Boston architect. The bride is the daughter of Mrs. Freeman Markwald of New York city, and is noted for her beauty. The marriage ceremony of the Episcopal church was performed by Bishop Clark, of Rhode Island, assisted by the Rev. George L. Locke, pastor of the church.

—The newspaper report that George H. Appleton committed suicide in Providence was without doubt a grievous error. It is well known that Mr. Appleton was a great sufferer from rheumatism and that for years he had been in the habit of taking morphine, under the direction of a physician, to lessen the

pain. There is little doubt but in this case he made a mistake and took an overdose.

—Mr. Joseph King, of the Hodgman rubber store, School street, Boston, recently paid an election bet in a sensational manner. Procuring a gayly-decorated wheelbarrow he wheeled R. A. Leigh from the State-house to the office of the *Boston Globe*. The course is down-hill, but the distance is considerable, as was also the crowd, and it was with a sigh of relief that the loser dropped his burden at the end of the course.

—The Boston friends of Mr. E. H. Chandler, many years with the Stephen Ballard Rubber Co. (New York), had the pleasure of congratulating him and meeting Mrs. Chandler in the Hub.

Mr. Chandler is a former New Englander and finished an extended wedding tour after passing Thanksgiving with relatives near Boston.

—Mr. George H. Hood, treasurer of the Boston Rubber Co., has fully recovered from the injuries caused by the recent accident to his knee, and was seen in New York recently walking without even a cane.

—The Gutta-Percha and Rubber Manufacturing Co., of New York, have just issued a new catalogue of their extensive line of rubber mats, matting, stair-treads and fire-hose, embracing illustrations of the different patterns and price-lists. It is an extensive catalogue, representing an important line of goods.

REVIEW OF THE RUBBER MARKETS.

DURING the past thirty days business in crude rubber has been of moderate dimensions, and as the end of year approaches it is expected that it will diminish considerably.

There are no stocks pressing upon the market, arrivals having been very well sold ahead, and the bulk of that in transit will pass readily into consumption. Prices have ranged on a higher basis. Old fine rubber has been quoted as high as 74 cents and new Up-river at 70 cents. There is very little coarse offering and prices rule for the most part at a nominal figure. Centrals are steady with small receipts. A little more has been done in African grades. The whole market seems to be very fairly on the basis of supply and demand. Political affairs and the silver question and such things are rarely mentioned in connection with the rubber market.

The world's visible supply of Pará rubber on November 30, compared with one month ago, and one year ago, was as follows, amounts being stated in tons:

	November 30, 1891.	November 30, 1892.	October 31, 1892.
United States.....	509	622	663
Liverpool.....	530	748	647
Pará.....	930	380	980
Afloat.....	1,000	1,550	845
Total.....	2,969	3,300	3,135

The deliveries in New York during the month of November were 770 tons and in England 690 tons. The receipts of Pará during November were 1870 tons as compared with 2200 tons in the same month last year.

The receipts during this month at Pará are estimated at 2500 tons. The water in the Amazon has been low and so continues. The stocks at Pará are low, in first hands there were 110 tons, in second hands, 270 tons.

A large proportion of the receipts of Pará in New York during the month were used to cover sales made in August and September for November and December deliveries. The prices obtained for this rubber was 63 @ 64½ for Islands, fine, and 65 @ 66½ for Up-river.

A great deal of the Islands lodged with the New York Commercial Co., while the manufacturers generally took the Up-river. One authority gives the deliveries at 3,000,000 pounds and the stock in New York at 2,000,000 pounds. Receipts in Pará are expected to be large this month, being estimated now at nearly 3000 tons.

The milreis has taken one of its periodical "jigs," on account of trouble in Rio Grande do Sul.

A late cable from Pará gives the price of Islands at 3950 reis and Up-rivers at 4250 reis, with exchange at 13¼d.

The statistical position of Pará rubber in New York is thus

reported for November, 1892, as compared with the same month in preceding years:

Stock of Pará here,	October 31,	about	1,325,000 pounds.
Receipts	November,	"	1,435,000 pounds.
Deliveries	November,	"	1,590,000 pounds.
Stock	November 30, 1892,	"	1,170,000 pounds.
Stock	November 30, 1891,	"	1,125,000 pounds.
Stock	November 30, 1890,	"	1,100,000 pounds.

PRICES FOR NOVEMBER.

	1892.		1891.		1890.	
	Fine.	Coarse.	Fine.	Coarse.	Fine.	Coarse.
First.....	67	45	63	46	74	53
Highest.....	68	47	68	51	74	53
Lowest.....	67	45	63	46	72	49
Last.....	67	46½	65	48	72	50

The latest New York quotations are:

Pará, fine, new.....	66@68	Sierra Leone.....	24@40
Pará, fine, old.....	70@73	Benguela.....	46@47
Pará, coarse, new.....	45@50	Congo Ball.....	36@42
Pará, coarse, old.....	48@52	Small Ball.....	33@36
Cauchó (Peruvian) strip..	45@42	Flake, Lump and Ord. .	25@26
Cauchó (Peruvian) ball... 51@56		Mozambique, red ball...	—
Mangabeira, sheet.....	36@40	Mozambique, white ball..	—
Esmeralda, sausage.....	50@51	Madagascar, pinky.....	56@58
Guayaquil, strip.....	40@42	Madagascar, black.....	40@42
Nicaragua, scrap.....	48@50	Borneo.....	28@43
Nicaragua, sheet.....	46@48	Gutta-percha, fine grade..	1.75
Guatemala, sheet.....	38@43	Gutta percha, medium....	1.15
Thimbles.....	39	Gutta-percha, hard white..	1.15
Tongues.....	35@40	Gutta-percha, lower sorts. nominal	

In regard to the financial situation Messrs Simpson & Beers, brokers in crude India-rubber and commercial paper, New York, advise us as follows:

"A moderate amount of first-class rubber paper was obtainable during November, and the rates for it ruled steady through the month at 6@6½ per cent. The outflow of money continues to the South to move the cotton crop, which is two weeks to a month late this year. A liberal supply of cotton bills have been deferred, thus necessitating a renewal of gold exports, a very unusual occurrence so late in the season. General conditions, however, favor a decline in money rates this month, and no doubt good rubber paper will be wanted soon at 6 per cent."

The trouble between the Panama Railroad and the Pacific Mail Steamship Co. bids fair to be confusing to rubber importers. The Panama Railroad owns one dock at Colon, the Hamburg line one and the English line one, and these are all. This would throw the Pacific Mail out. It is understood that the Railroad has arranged for two steamers on this side which will probably land in New York at an East-river dock. What is to be done on the Panama side does not yet appear, and on account of the large number of vessels required it may be difficult to arrange for the same. By the way, W. R. Grace & Co. are

extending their packet service, on the West coast, and it would not be strange if they were some day a factor in this business. At present they girt both coasts of South America, and have astonished the California people by showing them how very low freights around the Horn can be carried.

There are different theories as to the course of speculation in the common stock of the United States Rubber Co.

Those owning large blocks of it say they do not care to have it go up and there will be no disposition on their part to have it do so. Others say that when the dividend on the preferred is paid, next spring, the common may take a boom. Others, still, mistrust that a boom now would induce considerable realizing on the part of weak holders. As time wears along there probably will be two strong parties in the stock, one on the "bull," and the other on the "bear" side. It is better for the former party that no undue appreciation of the stock should take place at present.

THE RUBBER-GOODS TRADE.

THE volume of business so far as it relates to the wants of the people is very large, and so long as the population is at work and has plenty of money but little trouble can be expected. Low stocks are reported everywhere, and speculation in buying ahead is comparatively nothing. This is a healthy state of affairs, and it applies to the rubber trade in every sense. Everybody is doing more than ever before. A good thing about the mechanical-rubber and boot-and-shoe industry is that it takes many years of prosperity to induce the construction of new plants. The amount of capital required is the safeguard in preventing undue competition. In the clothing trade this is not so, but happily the demand at present is all that can be desired, and the opinion is also expressed that there will be few ventures in this line for some time to come. The reason for this probably is to be found in low prices. With a population of 65,000,000 people, we have less than a score of boot-and-shoe factories, less than that many mechanical-goods concerns, perhaps 200 clothing mills,—very few of them large,—three or four hard-rubber companies and an inconsiderable number of manufactories of druggists' sundries. Surely such a state of business must be a healthy one. The import business is simply trifling. All in all our rubber-men are to be congratulated upon the situation, and their efforts to constantly raise the standard of quality are praiseworthy in view of it.

The rubber trade for the past year in several leading cities may be reviewed briefly as follows: In Boston and vicinity the boot- and shoe-factories have all done well, the conditions having been favorable. A general consumption of goods last winter, better than since 1888, was noticed, and the price of raw materials being lower, the factories had a clear right of way to a profitable business. The clothing factories have done a larger business and earned good dividends. In Philadelphia the transactions in rubber goods increased in a general way about 10 per cent. In Pittsburgh the increase was about 15 per cent. In Southern cities, never good customers in the trade, there is little change. Cotton districts show some falling off; others show better returns, but under all circumstances the business is comparatively of a light character, and intelligent comparisons are difficult to obtain. In Cincinnati the business increased 20 per cent. in boots and shoes and clothing. In Louisville there has been a larger volume. In Cleveland it has been 15 per cent. better. In St. Louis a very good trade was experienced and in Kansas City a boom in everything—rubber goods with the rest. In the Northwest the trade has been excellent. In Chicago stocks at present are very light, and business has been fully 10 per cent. better. St. Paul makes some complaint about the price of wheat, while Minneapolis chirps over a 10 per cent. increase in trade

for the year, and a bright outlook. Beyond, in the Territories, all through the year the reports have been of the most cheering character. In the silver States the volume of business has been variable, but hardly better, and on the Pacific Coast of an even character with the previous year. The Pacific Coast is now being blessed with cheap ocean freights and a marked effect in all branches of trade is beginning to be seen.

In clothing the demand is very good chiefly for medium grades. The weather in the West has been favorable for a good trade. In New York there have been some special sales of mackintoshes. The attitude of the United States Rubber Co., which has an interest in the clothing business is not considered by the outside manufacturers. With reference to that company its position could hardly be a radical one. There are so many clothing dealers that an institution of low prices to gain the business would be a doubtful expedient, and it would take an age to obtain control, and to raise prices would be entirely out of the question. It is the opinion among the larger manufacturers that the clothing business will be entirely unaffected by the incidental absorption of the three factories by the United States Rubber Co. So far as the Mechanical Company is concerned, it is intimated that the Cleveland Rubber Co. will soon abandon the clothing manufacture.

In boots and shoes the demand is heavy, the difficulty being to get warm goods. In all heavy grades there has been a want of preparation and it is with difficulty that sufficient stocks can be obtained. In light goods the demand in comparison is not so pressing, still it is taxing. A shoe manufacturer said the other day that the past three months had been the best ever known. Every one had gotten rid of his stock, seconds and thirds sliding out of sight in a wonderful manner. More people than ever were disposed to buy rubber goods, and the weather had been of such a character lately as to make them very decided as to their needs. The only complaint that can be made is in the prices.

In mechanical goods there has been a large business, the sales of belting being probably the largest known in any previous November. The previous month, however, was somewhat dull and the average of the two is perhaps not more than usual.

In fact in all descriptions of mechanical goods the position is healthy. Prices for goods of quality are very fair, and the demand for such is steadily increasing. There are no large stocks anywhere, no failures and all are busy. The new mechanical company is making progress very slowly, little beyond the incorporation being known to the public.

In druggists' sundries the business is fair. Atomizers and Christmas goods are in demand. The demand for other articles is an average one.

IMPORTS FROM PARÁ.

THE imports in detail of rubber direct from Pará at the port of New York, since our last report, have been as follows:

November 1.—By the steamer *Finance* from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer.....	62,500	11,100	14,200	16,500	104,300
Lawrence, Johnson & Co..	10,900	3,500	11,800	.....	26,200
Boston Rubber Shoe Co..	.....	.....	16,000	.....	16,000
Sears Commercial Co.....	1,800	1,100	600	.....	3,500
Total.....	57,200	15,700	42,600	32,500	150,000

November 18.—By the steamer *Copulet* from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer.....	112,000	7,800	52,000	1,000	172,800
W. R. Grace & Co.....	64,000	5,700	10,200	.....	80,500
Joseph Banigan.....	.....	.....	36,600	.....	36,600
Lawrence, Johnson & Co..	10,000	6,400	12,000	200	28,600
Sears & Co.....	9,700	1,500	1,200	.....	12,400
Shipton Green.....	6,800	700	1,200	.....	8,700
Total.....	202,500	22,100	113,200	1,200	339,600

[IMPORTS FROM PARA—CONTINUED.]

December 3.—By the steamer *Vigilancia* from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	324,100	61,400	94,300	.....	479,800
Reimers & Meyer	101,400	42,800	63,600	.....	207,800
Boston Rubber Shoe Co.	30,000	5,900	10,800	8,600	55,300
Joseph Banigan	30,000	5,900	10,800	.....	46,700
W. R. Grace & Co.	28,200	5,000	6,000	.....	39,200
Lawrence, Johnson & Co.	17,800	2,100	3,000	.....	22,900
Shipton Green	1,700	.....	600	1,300	3,600
Total	533,200	123,100	189,100	9,900	855,300

December 6.—By the steamer *Oregon* from Pará:

Boston Rubber Shoe Co.	*111,300	.....	40,500	16,700	168,500
Joseph Banigan	*100,100	.....	50,400	.....	150,350
Reimers & Meyer	21,400	2,500	4,800	21,600	50,300
C. Ahrenfeldt & Son	2,200	.....	10,400	37,200	49,800
New York Commercial Co.	25,700	6,400	13,800	.....	45,900
Shipton Green	33,200	2,500	6,000	.....	41,700
P. Lima	2,200	.....	1,000	.....	3,200
Sears & Co.	.....	.....	3,000	.....	3,000
Total	296,100	11,400	129,900	75,500	512,900

*Part Medium.

IMPORTS OF CENTRALS.

BELOW will be found in detail the imports at New York, during November, 1892, of India-rubber from Mexico, Central America, and South America, other than Pará grades:

Nov. 1.—By the *Alco*=Carthagena:

	POUNDS.
H. W. Peabody	1,800
W. R. Grace & Co.	1,800
Pim, Forwood & Co.	4,600
Hoadley & Co.	800
Kugelmann & Co.	2,000
Punderford & Co.	600
Pim, Forwood & Co. (Port Limon)	150
Pim, Forwood & Co. (Savannah)	18,200
Total	25,650

Nov. 1.—By the *Argonaut*=Central America:

Eggers & Heinlein (Porto Cortez)	350
Joseph Agostini (Truxillo)	250
Eggers & Heinlein (Truxillo)	650
Munoz & Esprella (Greytown)	700
W. R. Grace & Co. (Greytown)	200
Hoadley & Co. (Greytown)	700
A. P. Strout (Greytown)	6,600
Eggers & Heinlein (Belize)	350
To Order (Belize)	200
Total	10,000

Nov. 5.—By the *Mexico*=Havana:

W. R. Grace & Co. (Colon)	12,500
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Nov. 10.—By the *Columbia*=Colon:

Eggers & Heinlein	300
Hoadley & Co. (Panama)	5,014
G. Amsinck & Co. (Panama)	5,069
[Ex San Blas=Central America]	.....
J. Aparicio & Co.	4,185
Herzel, Feltman & Co.	212
[Ex Santiago=South Pacific.]	.....
Herzel, Feltman & Co.	1,800
J. M. Ceballos & Co.	5,000
[Ex Maipo=South Pacific.]	.....
New York Commercial Co.	8,100
J. M. Ceballos & Co.	9,300
[Ex Quilo=South Pacific.]	.....
W. R. Grace & Co.	8,244
Hoadley & Co.	1,176
G. Amsinck & Co.	672
J. M. Ceballos & Co.	1,380
Herzel, Feltman & Co.	11,507
Andreas & Co.	5,830
G. Amsinck & Co.	22,866
C. Roldan & Van Sickle	1,500
Munoz & Esprella	2,200
J. McNider	451
Asencio & Cosio	2,080
Total	94,389

Nov. 11.—By the *Orizaba*=Progreso:

Thebaud Brothers	300
J. Agostini	300
H. Marquand & Co.	800
Z. Herman	900
Total	1,700

Nov. 14.—By the *Ciudad Condal*=Vera Cruz:

H. Marquand & Co.	100
P. Harmony's Nephews	600
Total	600

Nov. 14.—By the *City of Alexandria*=Mexico:

Graham, Hincley & Co. (Vera Cruz)	100
J. W. Wilson (Tuxpan)	400
H. W. Peabody & Co. (Tuxpan)	180
Louis Montjo Jr. & Co. (Tuxpan)	400
H. Marquand & Co. (Tuxpan)	400
Total	1,480

Nov. 14.—By the *Adirondack*=South Atlantic:

To Ferro (Cartagena)	1,600
Ellinger Brothers (Port Limon)	300
To Order (Cartagena)	2,600
W. R. Grace & Co. (Savannah)	5,000
Total	9,400

Nov. 20.—By the *Andes*=Port Limon:

Ellinger Brothers	800
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Nov. 20.—By the *City of Pará*=Colon:

A. N. Rotholz	376
Piza, Nephews & Co. (Panama)	2,800
[Ex Costa Rica=Central America.]
Munoz & Esprella	265
[Ex Arequipa=South Pacific.]	.....

J. M. Ceballos & Co.	6,100
[Ex Imperia=South Pacific.]

New York Commercial Co.	2,700
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J. M. Ceballos & Co.	1,735
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[Ex Starbuck=Central America.]
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Munoz & Esprella	275
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Pardo, Velasco & Co.	975
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J. W. Wuppermann	3,035
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H. P. Strout	120
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Total	28,381
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Nov. 21.—By the *Jason*=Mexico and Central America:

Munoz & Esprella (Greytown)	7,500
Marciel & Co. (Greytown)	720
A. P. Strout (Greytown)	8,500
Eggers & Heinlein (Cape Gracias)	18,050
O. G. Mayer & Co. (Cape Gracias)	15,160
Rising Brothers & Co. (Livingston)	350
Eggers & Heinlein (Livingston)	750
Total	51,030

Nov. 21.—By the *Fumuri*=Mexico:

Thebaud Brothers (Vera Cruz)	220
Thebaud Brothers (Laguna)	1,800
Total	1,920

Nov. 27.—By the *Alisa*=Carthagena:

H. S. Forwood	10,100
H. W. Peabody & Co.	980
Total	11,080

December 8.—By the steamer *Ambrose* from Manáos:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Lawrence, Johnson & Co.	92,300	21,500	28,500	.....	142,300
Reimers & Meyer	75,000	20,100	16,600	300	112,000
G. Amsinck & Co.	28,700	4,200	17,800	24,900	75,600
Boston Rubber Shoe Co.	44,800	9,600	14,600	.....	69,000
New York Commercial Co.	35,700	7,900	8,000	.....	51,600
Shipton Green	29,600	2,400	8,900	.....	40,900
Hagemeyer & Brown	22,500	4,600	3,800	.....	30,900
J. M. Ceballos & Co.	.....	.....	1,800	12,600	14,400
Lazard Freres	3,700	.....	700	.....	4,400
Total	332,300	70,300	100,700	37,800	541,100

December 8.—By the steamer *Alliance* from Pará:

New York Commercial Co.	207,800	29,600	43,200	.....	280,600
Reimers & Meyer	69,300	30,700	45,600	145,600

Total	277,100	60,300	88,800	426,200
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December 8.—By the steamer *Lisbonense* from Pará:

Joseph Banigan	94,600	14,300	13,800	122,700
Boston Rubber Shoe Co.	59,600	7,900	8,400	1,300	77,200
Lawrence, Johnson & Co.	45,300	1,800	9,000	.....	56,100
Shipton Green	35,000	3,300	5,400	.....	43,700
Otto G. Mayer & Co.	29,300	.....	9,500	.....	38,800
Sears & Co.	.....	.....	5,900	.....	5,900
Total	263,800	27,300	52,000	1,300	344,000

Nov. 28.—By the *Yucatan*=Campeche:

Thomas Hermann	400
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Nov. 30.—By the *Newport*=Colon:

Bock & Co.	1,210
Piza, Nephews & Co.	2,691

[Ex San Jose=Mexican Ports.]

H. Marquand & Co.	150
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[Ex Quilo=South Pacific.]

F. G. Tomes	601
Hoadley & Co.	132
G. Amsinck & Co.	18,257
Hirzel, Feltman & Co.	241
J. M. Ceballos & Co.	831
W. R. Grace & Co.	9,100
Andreas & Co.	3,520
Camacho, Roldan & Van Sickle	9,412
To Order	1,667
[Ex Mendoza=South Pacific.]

To Order	2,400
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Total	50,212
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Total Imports of Centrals	289,522
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BOSTON ARRIVALS—ALL GRADES.

	POUNDS.
Nov. 4.—By the <i>Roman</i> =Liverpool:	
Reimers & Meyer, Africans	34,700
Pará, fine	11,100
Nov. 8.—By the <i>Cephalonia</i> =Liverpool:	
George A. Alden & Co., Africans	5,600
Nov. 14.—By the <i>Boston City</i> =London:	
Reimers & Meyer, Africans	40,000
Nov. 15.—By the <i>Virginian</i> =Liverpool:	
Joseph Banigan, African thimbles	27,500
Nov. 16.—By the <i>Michigan</i> =Liverpool:	
Reimers & Meyer, Africans	41,000
George A. Alden & Co., Africans	12,800
Nov. 17.—By the <i>Philadelphia</i> =Liverpool:	
Joseph Banigan, African thimbles	10,600
Nov. 17.—By the <i>Durham City</i> =London:	
Reimers & Meyer, East Indian	11,000
George A. Alden & Co., East Indian	10,900
Nov. 24.—By the <i>Lake Superior</i> =Liverpool:	
Joseph Banigan, African thimbles	40,300
Reimers & Meyer, Africans	25,000
Nov. 26.—By the <i>Stockholm City</i> =London:	
Reimers & Meyer, Africans	23,000
Ropes, Emmerton & Co., Madagascar	3,600
Total Pará	11,100
Total Africans, etc.	286,000
Grand Total	297,100

NEW ORLEANS ARRIVALS.

[For the Month of November.]

	POUNDS.	VALUE.
From Nicaragua	71,028	\$25,044
From Colombia	1,808	1,255
Total	72,836	\$26,299

HISTORY OF A SOUTHERN RUBBER HOUSE.

By Wm. H. Corner, Jr.

THE retirement from the trade of the well-known rubber jobbing house of Janney & Congdon, Baltimore, Md., as announced in the last INDIA RUBBER WORLD, is an occasion which justifies a short review of the history of this concern, so prominent in the rubber business in the South for the last fourteen years.

In July, 1879, Mr. E. L. Janney, who had been for about three years Baltimore agent for the Goodyear Rubber Co. (New York), formed a copartnership with Mr. Samuel H. Congdon, under the above familiar name. Mr. Janney had had a long and varied experience in the rubber-goods trade, while his partner had been for several years in the agricultural-implement business. The venture was a success from the start. Early in 1880 the concern took the agency of the American Rubber Co. (Boston) and the New Jersey Rubber Shoe Co. (New Brunswick), building up at once a good trade in the lines manufactured by these two companies. These were the days when lists were long and discounts were short. Luster sacks readily sold to the trade at \$2.25 list, and the variety of clothing was confined to our present heavy line, and two high-priced fancy coats known as the "old gold serge" and "pin check." There was an active demand for these goods at from \$3 to \$3.50 and they retailed readily at \$5 and \$6. The same goods can be made to-day and are sold to the trade at from \$1.50 to \$2, thus showing a wonderful drop in prices and at the same time, a great lessening in the cost of manufacture. Yet it was impossible for the mills at the period mentioned to turn out these goods fast enough.

The state of Mr. Janney's health was such, in January, 1881, that he was obliged to retire from active business, and shortly afterwards he died. The business was now managed entirely by Mr. Congdon, who, though a short time previous a novice in it, had now thoroughly mastered the details and was known in the New York and Boston markets as a big buyer and distributor. The securing of the agency of the New York Belting and Packing Co., previously controlled by their active competitors, Messrs. Towner, Landstreet & Co., of Baltimore, who were then recognized as the leading Southern rubber firm, was a "ten strike" for Janney & Congdon. Mr. Congdon gave a great deal of his time and attention in securing contracts from city fire departments for fire hose, and was able to secure the major part of the large orders of the fire department of Baltimore and some other Southern cities. Only recently the house secured a single order of 5000 feet of hose. They were also active in other mechanical lines of the rubber trade and have, during their time, had the agencies of P. Jewell & Sons, Hartford, Conn.; James Davis & Co. Pawtucket, R. I.; and the Page Belting Co. of Concord, N. H., in leather belting and leather sundries. At this time there were no rubber jobbers farther south than Baltimore. It that city Thomas K. Carey was the selling-agent for the Boston Rubber Shoe Co. and the

Fairfield Rubber Co.; Towner, Landstreet & Co. agents for the Woonsocket Rubber Co., and Janney & Congdon for the companies before mentioned. These three houses practically did what general rubber business was done from Baltimore in the South, and competition, outside of the home market came mostly from New York city, from several concerns whose representatives traveled the South, but not nearly so closely as the Baltimoreans.

The recent great development of the South, and the want of native capital to develop her industries, was the incentive for some outside parties to try the rubber business in some of the fast-growing cities below the Potomac, and the now great city of Atlanta, Ga., was selected by Colonel Lewis, of Cleveland, Ohio, as a suitable location. He started the Atlanta Rubber Co., which, after a quite active existence, was forced to assign recently. Richmond, Va., was the next point tried, and Messrs. Garcin, Moseley & Co. went to the front very fast in mechanical goods, making a specialty of rubber belting for cotton-gins. Later, Mr. Garcin joined the forces of the Empire Rubber Co., of Trenton, N. J. William T. Moseley associated with himself Henry Bohmer, and these gentlemen energetically conducted, until within a few days past, the Southern Rubber Co., at Richmond.

Prior to 1890, business in general rubber goods in the South, outside of mechanical goods, was very small, but with new houses, more travelers, larger lines and, especially, the cheapening in the cost of rubber clothing and druggists' sundries, a very large increased demand was noticed. The advent of the low-priced gossamer cloak was quickly taken hold of by the Southern merchants, and when the "electric finish" was first introduced, the demand was very active, colored women buying them and wearing them, even in dry weather. The colored consumer has always been a lover of anything in the dress line that is bright and attractive, and as his purse is always small, the South has naturally been the largest buyer of low-grade as well as panic-priced rubber clothing, for both men's and women's wear. It was during the existence of the combination of the gossamer manufacturers that Janney & Congdon had their most successful season. Mr. Congdon, expecting this turn, had placed a very large contract for "electrics," and these goods were readily turned over at a margin of nearly 100 per cent. The visit of President Cleveland and his wife to the South, at this time, coupled with the fact that it rained nearly every day, made it very easy to sell goods, and salesmen who were in the South at this time have never seen anything like it before or since. The towns were crowded with country people, and in some cases samples were sold from the salesman's trunk to the consumer, and new samples telegraphed for.

Both Mr. Janney and Mr. Congdon were always popular with their employes, and many of the well-known representatives of the trade to-day filled different positions.

under the management of these gentlemen. Some who started with the house at its beginning will remain to see the old flag come down, including Louis C. Dietsch and R. E. Higgins. William E. Wysham, now Southern representative of the Hodgman Rubber Co., and H. C. Koffenberger, in charge of the rubber boot-and-shoe department of Messrs. Frank & Adler, have only recently left the concern. Among the other gentlemen filling road positions for Janney & Congdon, at different times, was the late Thomas Williams, who was also many years with Thomas K. Carey & Co., and was, in every sense of the word, one of the road veterans in rubber goods. Another was Frank L. Mark, well-known in the rubber trade in Portland, Me., which town he left to travel South for Mr. Congdon, and which position he filled with honor to himself and the house for four years. Mr. Mark retired from the rubber business and is a successful merchant at Freyburg, Me. Charles D. Cugle, now well known in Boston and Hartford in connection with the Conant Rubber Co., first got his knowledge of the rubber trade with Janney & Congdon. Mr. Cugle is now manager for the mechanical department of Messrs. Boyd, Jones & Co. William H. Corner, Jr., of the Boston Rubber Co., and for the last five years their New York agent, was another beginner with the Baltimore firm. Perhaps the best known traveler for Janney & Congdon was Louis C. Miller. He was several years with the house, having joined in May, 1884. He has seen the rubber business in all its developments from the very start and has filled positions with nearly all the Baltimore houses in the line. Mr. Miller is at present, and has been for several years, representing the interest of Messrs. Boyd, Jones & Co., in Washington, D. C., Virginia, West Virginia and Kentucky. Messrs. S. Preiss & Sons' Southern representative, H. C. Klunk, also got his education in the rubber line with Janney & Congdon.

In 1888 Mr. Congdon retired from the business and he took a long trip through South America. The business has since been managed by Mr. Gilbert Congdon, eldest son of the former proprietor, for his mother. The many friends of the house throughout the country will be sorry to hear of the closing.

The Rubber-Mat Infringement Suit.

TO THE EDITOR OF THE INDIA RUBBER WORLD: You have from time to time given more or less attention to the suit pending between the New York Belting and Packing Co. and ourselves, and if we remember correctly, you gave full prominence to a decision that was temporarily against us. We now want to call your attention to the fact that the Court of Appeals has rendered an elaborate opinion, and decided that our mats did not infringe the alleged patents of the New York Belting and Packing Co., and ordering all costs of the entire litigation against our adversary. Briefly stated, the suit was brought against us in 1887, for an alleged infringement of a corrugated mat. The case came up before Judge Wallace, and was decided in our favor. The plaintiffs then appealed to the Supreme Court and that body decided that so far as the patent went beyond a specific design shown by them, it was void, but that it might be valid as to a particular design, and they ordered a new

trial. Proofs were taken for both sides, and the case carried before Judge Coxe, who decided against us. The plaintiffs in the case then brought annoying suits against our customers, and we obtained an injunction restraining them from prosecuting. We then took the case to the Court of Appeals, and that body,—as we have stated above,—has just rendered an opinion, in which they hold that our mats did not infringe any valid claim; have reversed the decision of the Circuit Court, and ordered all costs of the entire litigation against our adversary.

NEW JERSEY CAR SPRING AND RUBBER CO.

Jersey City, N. J., December 10, 1892.

They Will Exhibit at the World's Fair.

A LIST of intending exhibitors at the Columbian World's Exposition to whom space has been allotted, for the States of New York, New Jersey, and Connecticut, appears in the New York *World*, in which the following names of rubber concerns are given:

Butler Hard Rubber Co., New York.
Canfield Rubber Co., Bridgeport, Conn.
Colchester Rubber Co., Colchester, Conn.
Goodyear's India-Rubber Glove Manufacturing Co., New York.
Gutta-Percha and Rubber Manufacturing Co., New York.
Hodgman Rubber Co., New York.
India-Rubber Comb Co., New York.
F. J. Kaldenberg Rubber Co., New York.
Mineralized Rubber Co., New York.
New York Insulated-Wire Co., New York.
New York Rubber Co., New York.
United States Rubber Co., New York.
Waterbury Rubber Co., New York.

The Pope Manufacturing Co. will have an imposing display of bicycle- and sulky-tires at Chicago. The detail is now being worked out and will be carried on through the Chicago house.

The American Wringer Co. applied for space at the World's Fair, but the papers were mislaid in Chicago. They were thus neglected until it was so late that it is doubtful whether space can be assigned at all. Should the matter be adjusted, in all probability an excellent display of the manufactures of this leading company will be made.

The Gutta-Percha and Rubber Manufacturing Co. have had a large space assigned to them, in which will be exhibited a full line of their goods. The details of the display will not be determined until next year.

Rubber Imports and Exports for October.

THE imports of India-rubber and Gutta-percha into the United States for October, compared with the same month one year ago, are thus stated by the Government reports:

	1892.	1891.
India-rubber, pounds.....	2,016,818	4,925,290
value.....	\$1,233,112	\$2,075,119
Gutta-percha, pounds.....	20,697	10,746
value.....	\$8,443	\$1,698

From the beginning of the year, including October, the imports of both commodities aggregated 29,444,748 pounds against 30,417,552 pounds for the same period of 1891.

The value of rubber shoes exported is stated at \$34,702 against \$29,995 in October 1891. The value of other manufactures of rubber is stated at \$136,375 against \$103,377 in 1891. The value of India-rubber and Gutta-percha goods imported in October was \$29,215.

